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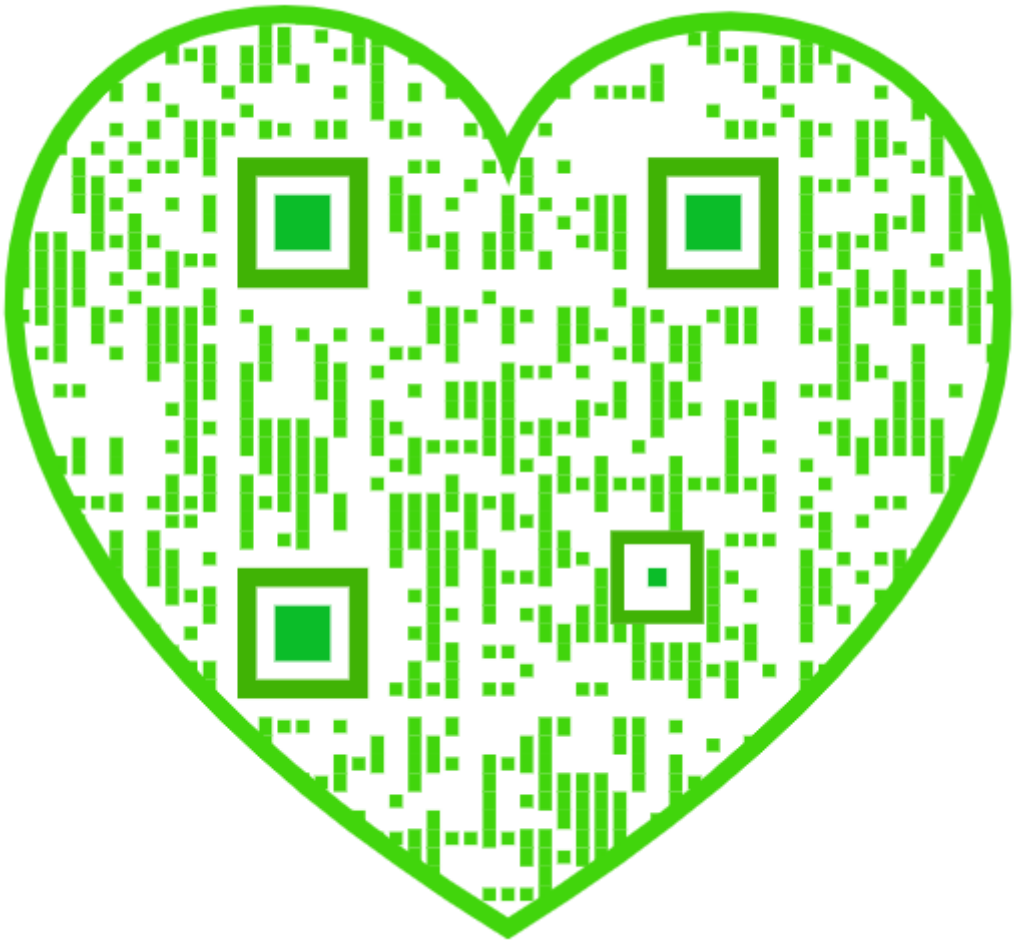

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The Bee-Keepers' Calendar.

JANUARY, 1922

1 Sunday. "As the wax increases in the hive, so give us all Good Fortune."—*Old Proverb.*

2 Monday. "The bee with his comb,
The mouse at her dray,
The grub in its tomb,
Wile winter away."—*R. Browning, "Pippa Passes."*

3 Tuesday. "We tread the paths their feet have worn,
We sit beneath their orchard trees,
We hear, like them, the hum of bees
And rustle of the bladed corn."
J. G. Whittier, "Snowbound."

4 Wednesday. "O for Daphne! Gentle Daphne!
Ever warmer by degrees
Whispers full of hopes and visions
Throng her ears like honey bees!"
Geo. Meredith, "Daphne."

5 Thursday. "Thousandz of thornz there be
On the Rozez where gozez
The Zebra of Zee;
Sleek, striped and hairy,
The steed of the Fairy—
Princess of Zee."—*W. de la Mare, "The Bees' Song."*

6 Friday. "Grey were her eyes, and her hair was long and bonny,
Golden was her hair, like the wild bees' honey."
John Masefield, "Third Mate."

7 Saturday. "Thus may we gather honey from the weed,
And make a moral of the devil himself."
Shakespeare, "King Henry V."

8 Sunday. "And, as it works, th' industrious bee
Computes its time as well as we.
How could such sweet and wholesome hours
Be reckoned, but with herbs and flowers!"
A. Marvell, "Thoughts in a Garden."

9 Monday. "Large and low was the roof; and on slender columns supported,
Rose-wreathed, vine-encircled, a broad and spacious veranda,
Haunt of the humming-bird and the bee, extended around it."
Longfellow, "Evangeline."

10 Tuesday. "This lonely yew-tree stands
Far from all human dwelling: what if here
No sparkling rivulet spread the verdant herb?
What if the bee love not these barren boughs?"
Wordsworth, "Lines left upon a seat in a yew-tree."

11 Wednesday. "The hue of heather-honey,
The hue of honey-bees,
Shall tinge her golden shoulder,
Shall gild her tawny knees."
R. L. Stevenson, "Songs of Travel."

Greetings.

We thank our many readers for their good wishes for both ourselves and the JOURNAL—good wishes which we heartily reciprocate.

We are gratified to know that our paper is appreciated both for its helpful information and its success as an advertising medium. We are constantly receiving testimonials as to the value of the JOURNAL for advertising purposes for bee-keepers. We have been told time and again, and by those who have advertised widely, there is no other medium for this class of advertisements that can compare with it. We shall be grateful if those answering advertisements will mention THE BRITISH BEE JOURNAL when doing so.

At the time of writing the weather continues open and mild, and we repeat the warning we gave a short time ago to see to it that there is no shortage of stores. There is not only the increased consumption to take into account, but, as one correspondent pointed out, honey has this season generally granulated sooner than usual. Our experience of honey stored for winter food and granulated in the brood combs is that the bees do not—or cannot—use the hard granules, these being found on the floorboard. If in doubt, give candy. It is almost impossible to have too much food in the hive during the winter months—an item that should be borne in mind when preparing for winter—but a shortage may mean disaster.

The gales of the last few weeks will have tested the security of the hive roofs, possibly of the hives themselves, and it is advisable to look round now and again to see that all is safe.

Very shortly the appliance manufacturers' and dealers' catalogues for 1922 will be out. Do not omit to obtain one, and place any orders as soon as possible; by so doing there will be a gain in time, money, and temper when the season is in full swing.

We have a number of letters waiting to be answered, and we apologise to those who have sent them for the delay. There is inevitably an extra amount of work towards the end of the year, and our correspondence has got sadly in arrear. We will do our best to get all cleared up as soon as possible.

A Dorset Yarn.

One more Christmas come and gone, another New Year before us. May it be a prosperous one to all bee-keepers! May all be as happy as the writer of the Dorset Yarns, who writes on bees because he realises the great good they do; their wonderful capacity for work, the amount of surplus they will store if given plenty of storing space, the interest that their life history has, how much they differ from other great orders of the insect kingdom, which mostly lay their eggs on the plants that develop each species and trouble no more about them, while bees build the cradles for the young and feed them, keeping them carefully warm until they develop into perfect bees. In the years that are gone I have written on bees and flowers, bees and fruit, with a good bit of other matter thrown in; this has given me many friends, given me many correspondents from all parts of the British Empire. Visitors in units, tens, and crowds; several from Australia, one from America, and one from South Africa, who had read the "B.B.J." thousands of miles away, and, as one of them who came from Geelong, in Australia, put it to me, after showing me a quotation from a Sydney paper, when next in the "Old Country" he would come and see the Violet Farm. "Write what you see of bees and their habits; it gives pleasure to some who are in distant lands," he said. If this is so, Mr. Editor, and you can still find room for a short par. from Dorset, we'll try and carry on for another year.

Winter is not the best time to write of bees, as they are not so much in evidence as in the other three seasons, but even though very wet on the morning of Christmas day, the sunshine in the afternoon brought out our bees to look over the wild gorse. This is

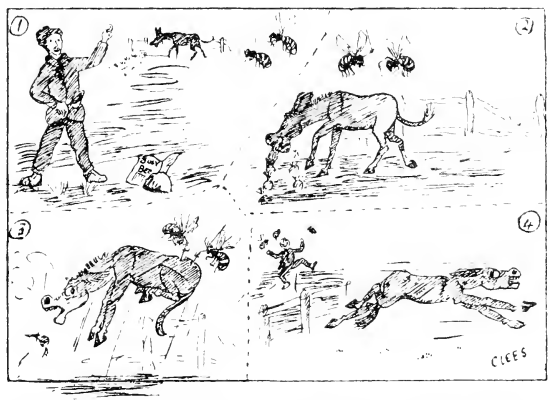
very floriferous on the moorlands and roadsides just now. I paid a hurried visit to Ireland on Monday before Christmas, the first visit to the "land of my fathers." I only went as far as Athlone, so did not see much of the country; never saw a single bee, though flowers were to be seen that bees delight in. I was particularly struck with the fine cattle that were at Mullingar, and which did not realise much more than half the local English prices. Must visit it again in summer time. There should be a great future before the country for bee-keepers; even the Army is teaching bee-keeping to the young soldiers. (I was with one of the teachers on the return journey to Euston.) This country must work out its own salvation. Bees should be a paying problem towards buying out the farms for the people, as it has helped to buy mine.

In reference to prices of English honey, which is offered at 1s. 6d. per lb. in "B.B.J.," I am offered (from a confectioner) Australian honey, in tins of 80 lbs., for 25s.; this is the reason why the finest English honeys are hanging. Though he who works sections does not get the heavy weights, as do those who do only bars for extraction, they have no trouble to clear them at remunerative prices. If only an English bee appliance firm could produce the sections at easier rates there would be still more doing comb honey. I have bought the cases of 500 for 25s. and 30s., but now it is a price that would pay an English firm to produce them. Even if we have not the number of lime trees to spare, other woods like poplar would do for the saw. Why not chip? They would not look so well, nor be so accurate in squareness, but colour would not matter so much now, as many shops like them all covered with grease-proof paper to keep off flies. They are not so particular about the glazing of them, if good paper is used. This also covers the whole of the wood case; glass is the heaviest material to use, and now that high prepaid rates are charged, sections, if well papered and good card dividers are used in the close packing, usually travel very well. I have a friend in Bournemouth who has had them from North Wales. He found many faulty with glass, so few spoilt in transit when only faced with paper—the dividers kept them firm, even though they had three movements before they were in the direct train for the South.

Now is the time for shaping up the next season's work. Bee-keepers would do well to do more sections. Mr. Cooper, the largest bee-keeper in the Isle of Wight, says he does all sections, and "has no trouble to clear them at remunerative prices. What is not completed in one year is saved for completion the next." I met him at the Southern Counties Show in June.—J. J. KETTLE.

Hint—How to Remove Mules from Allotments.

We are indebted to Messrs. Bees, Ltd., Mill Street, Liverpool, for permission to publish this clever drawing, sent to them by



Clifford Lees, aged 14, and published in their paper for gardeners, "The Busy Bee," with the following note:—Evidently the mule is an inveterate carrot thief, and is also guilty of trespassing contrary to the Cultivation of Lands (Allotments) Order, under D.O.R.A. The owner (of the carrots) appears to have secured an ejectment order against the mule, which is being strategically and vigorously carried out by a pair of bees belonging to the Special Constabulary.

South Australian Honey.

There are in South Australia 500 apiarists, who last year gathered between £50,000 and £60,000 worth of honey. In 1919-20 the number of productive hives (which are in all parts of the State) was 11,719, with a yield of 552,976 lbs. of honey and 7,350 lbs. of beeswax. These figures, however, are below the actual result, as no record is kept of much that is disposed of. Oversea exports

totalled 169,920 lbs., valued at £4,805, of which 151,389 lbs., worth £4,300, went to the United Kingdom. In South Australia the larger apiaries, consisting of from 500 to 800 colonies, are established in places where settlement has not been followed by the destruction of the native timber.

The climate is excellent for bee life, only about three months of the year in the depth of winter being unfavourable; but even during this period bees are to be found on sunny days working among the flowers. In the River Murray districts, too, honey is gathered all the year round when the winter, as is generally the case, is not severe. The main source is the native flora of the eucalypti family. The red and blue gums are prolific producers of nectar, which yields a honey of fine flavour and consistency, but many other plants, indigenous and introduced, contribute their quota to the general supply.—From the *Financier & Bullionist.*

Owing to the inclusion of the Title and Index for 1921, several articles in type, including Jottings from Huntingdonshire, are unavoidably held over till next week.—EDS.

Trade Catalogue Received.

Mr. E. J. Burtt, Stroud Road, Gloucester, has sent us a very comprehensive classified list of books and magazines for bee-keepers, both English and foreign. It will be sent on receipt of a postcard.

Special Prepaid Advertisements.

One Penny per Word.

PRIVATE ADVERTISEMENTS.

2½ CWT. good quality English Honey, granulated, in 56-lb. tins, £5 10s. per cwt., carriage and tins free; sample 6d.—F. CLARKE, Southrop, near Lechlade, Glos. a.2

FIVE 28-lb. tins of best quality Granulated Honey. Offers invited.—HAWKEN, Polkerris, Par Station, Cornwall. a.4

PURE LINCOLNSHIRE HONEY, 28-lb. tins, £7 per cwt., carriage paid; sample 4d.—THOMPSON, Helpringham, Sleaford. a.5

FOR BEGINNERS.—Complete Outfit, excellent condition, £2 2s.; three Overton's double-walled Hives, lift, super, thrice painted, sacrifice, £1 1s. each.—EDGEWORTH, Woolwich Road, Belvedere. a.17

WANTED, one or more Wells' or other Multi-queen Hives.—PACKINGTON, 2, Moorgate Terrace, Rotherham. r.w.79

COMPLETE MODERN APIARY FOR SALE, consisting of 40 strong Italian Stocks (1921 Queens), in nearly new 13-frame Hives, zinc-covered roofs, each hive fitted with excluder and two supers; 4-frame Extractor, Ripener, Feeders, etc.; carriage paid in Great Britain; April delivery; £300, or near offer.—Box 48, B.B.J. Office, 23, Bedford Street, Strand, W.C.2. w.11

BUSINESS ADVERTISEMENTS.

1½d. per word.

CARNIOLANS.—Buy British-bred Queens, and have less trouble with supersedure. List.—SWAFFIELD, Libertus Villas, Cheltenham. r.a.3

BUCKFAST QUEENS are the very best. Our 1922 Circular will shortly be ready.—(REV.) BROTHER ADAM, Buckfast Abbey, Buckfast, S. Devon. a.6

THE NEW FIRM.

SPECIALITIES:

1. The Improved Convertible UNITIVE for Standard and/or Commercial Frames.

2. The "CLYDE" BEE-HIVE, single walled, reduced top-bars.

3. The "B" FLOOR-STAND, providing automatic ventilation, compact loading of hives, quick confinement of bees, and facilities for treating "I.O.W." Standard with both 1 and 2.

4. COMBINATION Float or Bottle Feeder, "Isle of Wight" Disease Treatment Box, Winter Passage, and Spring Inspection APPLIANCE.

5. Double-purpose Section/Extracting Frames and Racks.

Modest advertising, and the co-operation of progressive bee-keepers to keep down overhead expenses, ensure reasonable prices.

Literature, 4d. stamps.

JAMES B. BALLANTYNE,
HAZELBANK, LANARK.
a.1

9D. PER 1 LB. CANDY.—4 lbs., 4s. 6d.; 10 lbs., 9s. 9d.; post free; larger orders 9d. f.o.r.—COBB, 33, Bevan Road, Plumstead. a.18

BENHALL BEES.—A limited number of really good 3-frame Nuclei, headed by purely-mated 1922 Italian Queens, during May £2 10s. Cash with order.—RIVIS & GRAY, Benhall, Saxmundham. r.a.7

FAMOUS COTSWOLD QUEENS, bred from highest yielders, certain to please. Book your supply forthwith. Circular free.—BOWEN, The Queen Breeder, Cheltenham. a.8

THE finest bee insurance is Bowen's Incomparable Candy, 7 lbs. 8s., 10 lbs. 11s. a.9

HOME INDUSTRY.—Prepare your frames on Bowen's Wiring Board; saves hours; price 7s. 3d.; outfit, 13s. 6d.—BOWEN. a.10

PURE CARNIOLAN BEES.—Stocks and Nuclei at cheapest rates. Book now. Particulars, stamp.—DANIELS, Pantycrwys, Rhydcwmerau, Llandilo. a.11

WONDERFUL CARNIOLANS AT PRE-WAR PRICES.—1922 Queens, bred from the only Carniolan stock selected for more than 20 years past with great care in ensuring the best possible honey results.—SIMMINS, Queenland, Heathfield, Sussex. r.a.12

NEW HARDY YELLOW VARIETY.—No loafers hottest days. Gathered honey 1921 after all others had retired from business.—Particulars, S. SIMMINS, Queenland, Heathfield, Sussex. r.a.13

THE WELSH BEE GARDENS, Ashgrove, Brecon (Proprietor, Lt.-Colonel Weaver Price).—Now booking Stocks and Nuclei. Highest grade Italians. r.a.15

The Bee-Keepers' Calendar.

JANUARY, 1922

12 Thursday. "They huddle in a heap, and trembling stand
All round Titania, like a queen-bee's band."
T. Hood, "Midsummer Fairies."

13 Friday. "Star that bringest home the bee,
And sett'st the weary labourer free!"
T. Campbell, "Song to the Evening Star."

14 Saturday. "There's the Barton rich,
With dyke and ditch,
And hedge for the thrush to live in;
And the hollow tree
For the buzzing bee
And a bank for the wasps to hive in."—*J. Keats.*

15 Sunday. "Pleasant words are as an honeycomb, sweet to the soul and health to the bones."—*Proverbs* xvi. 24.

16 Monday. "Mine be a cot beside the hill.
A bee-hive's hum shall soothe my ear."
S. Rogers, "A Wish."

17 Tuesday. "Meanwhile I murmured on
As honeyed bees keep humming to themselves."
E. B. Browning, "Aurora Leigh."

18 Wednesday. "The bee, in pied velvet dight."—*T. L. Beddoes.*

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Editorial

Obituary Notice.

REV. R. M. LAMB.

We were sorry to hear of the death of the Rev. Richard Martindell Lamb, M.A., Rector of Burton Pidsea, near Hull. He was a veteran in the craft, whose name was well known not only in Yorkshire, where he has often acted as lecturer, and judge of honey at the Yorkshire and other agricultural shows, but to bee-keepers generally. He has been Rector of Burton Pidsea since 1886, and at one time the Rectory garden was crowded with bee hives. Mr. Lamb sent his bees to the Yorkshire moors for the heather harvest for thirty years without a break until the war. For this purpose

he preferred a frame with Abbotts' top-bar, having wooden shoulders for spacing, instead of metal ends, as he considered they gave greater stability.

Mr. Lamb, who was 73 years of age, died somewhat suddenly, after a brief illness, on December 26, 1921. As a matter of fact, Mr. Lamb was in Hull the week before he died, and although he has appeared to be in indifferent health for some time, it was not anticipated that his condition was so serious.

He leaves a widow, three daughters and two sons.

A Dorset Yarn.

"Life is the mill which man is eager to study."
"Every man lives only for his own happiness."

The life of the bee is what the bee-keeper must study for success in honey production. The difference between "keeping bees, and letting the bees keep you"; so many keep bees, but do they make them add materially to the bank balance? It is only by reading up the books on honey production that the bee-keeper can improve himself. The first study is the life of the bee. Learn how its short life is devoted to the good of the community; all life is to develop the race. Where man lives for his own happiness, bees find pleasure in hard work to carry on the race after its short life is over. Man works in the fields for the production of food, but he tires of continuous toil; he must sleep to rejuvenate the tired system. Bees never seem to tire when there are stores of nectar to be harvested. Even at night in the honey flow they always seem to be on the move. Those of us who have had a long innings of life know that real happiness comes when toil is congenial Work will not hurt anyone who lives a clean life. Pleasure is sure to come when the harvest is realised. The sale of produce adds to bank balances—happiness must follow. Bees, if looked after with all the best appliances, will add materially to the wealth of him who owns them. They will give him more to do through the summer months, but the extra wealth they will bring will give the greater happiness. To do all this he will find that the bee must be the object of study: what each strong stock will do in one year; if all the necessary surplus racks are got ready at the proper time; what extra lifts he will need to build up his hives so that they will take three racks of standard bars if necessary, or four and five racks of sections; this is the "mill" that the bee-keeper must study, and study closely, in order to "let the bees keep you." Remember the virgins who had their lamps filled; they were ready; so must the bee-keeper be ready for the season's honey flow.

Bees are now carrying pollen from several sources; the Christmas rose is the only one that is close to our hives. The wild flowers are confined to the gorse and a few daisies, but bees carry pollen each hour of sunshine. This, according to books, is a sure sign of early breeding, and is quite possible where bees are very strong. I have some with a wood cover over the brood chamber, with a piece of glass let in to mark the progress of the bees. These, when the felt covering is lifted, can be seen in continuous motion on top of the bars, all packed closely together, but all of them in motion; food and strong hives will be wanted in plenty. Books will help the novice to know when they are short of stores; books will tell him how to feed, and what is best for food in mid-winter. A few shillings spent wisely at the right time will mean pounds to him at the honey season. I have had some fine works sent to me which have been a source of pleasure to read, even though many extracts from them are in other works. Books will show you the best hive to use (the cheapest is not always the best). Hives of the W.B.C. pattern are favoured by most bee-keepers, only they must not be too small. For extracted honey I consider that they ought to be large enough to take a brood box of up to twelve combs. The usual is for ten, but the twelve can easily be filled by a good queen The extra extracted honey from the twelve that are put on top of them is considerable. Books will show the novice how to entice bees up into sections; will tell him what are considered best for exhibition, and how best to arrange them for the show bench; but first study the bees well. Get all the knowledge of what they will do off to memory; then as each month goes on you will know what is going on in the hive, until the days lengthen, and we can open out the combs and see for ourselves.—J. J. KETTLE.

Jottings from Huntingdonshire

"I want to start bee-keeping next season, and having only a little capital, I don't wish to spend too much in the initial outlay; and being unable to make my own hives, what hive would you advise me to purchase as my first home for bees?" This is an extract from a letter by a Yorkshire correspondent, and as it deals with a subject which must interest beginners I have quoted it here.

One cannot pick up a catalogue from any bee-appliance maker without being struck by the various types of hives offered for sale. I have myself hives of ten different patterns; all have commendable points, and yet I often wish that since every hive but two takes standard frames they had interchangeable parts. We have standard frames, but no standard hive. Even the well-known W.B.C. hives are never turned out alike by two makers. In fact, some hives sold as W.B.C. are enough to make the late Mr. Carr turn in his grave. I have always felt that steps ought to be taken to secure W.B.C. hives being made to steadfast specifications, so that by whomever made the parts would be interchangeable. It is

humorous to see a W.B.C. hive illustrated. First it is shown standing complete side by side with an illustration of the same hive in separated parts. In one the legs are nailed to the floor board supports, in the other the legs are fastened to a frame on which the floor board rests. A detail perhaps, but goes to show the lack of consistency in hive making to a certain standard. If I were about to commence bee-keeping over again I should start with an Irish C.D.B. hive. This hive is easy to manipulate, easy to keep clean, looks well, and can be packed into a small compass when being moved about. I always think legs fastened to a hive are an abomination, unless, which is hardly likely, one is going to keep his hives in one spot until they rot. The legs of the Irish C.D.B. hive screw off, and what a blessing that is when moving a stock of bees on a lorry to new pasture. The Scottish C.D.B. hive is a capital contrivance, and is not to be despised, and has the great advantage of being able to take an inner brood-box containing frames 16 by 10, but a drawback is the difficulty of fixing Swiss entrances to this hive. Most bee-appliance makers turn out a simple economic hive, which will be found to be quite serviceable, but for the sake of a few extra shillings I should advise the Irish congested districts boards hive. At any rate, you will get what you ask for if you order the Irish C.D.B. hive, you may get disappointment over a W.B.C. Needless to say, as the beginner gets established in the craft he will strike out a line for himself. He may select a Mashheath, a Cumbernauld, a Wiltshire, a Wells, a Dadant, a Knuts double-decker, a Conqueror, a Caledonian, an Insulator or even a Collateral hive; but ye would be beginners, if ye buy, go warily. Buy from firms with a reputation—they use seasoned wood. It is not the happiest experience to get a hive and find it swells greatly during damp weather, and is almost unmanipulatable, or gets a distorted shape under the rays of midsummer sun. Those who are making hives should guard against green wood.

Many suggestions have come my way from young beginners, the majority being either impossible or a repetition of those of great writers in the bee world. Floor board supports with slopes at one end are as old as the hills, as also is the piece of perforated zinc over the brood nest; but I am grateful to one correspondent for suggesting coach-bolts as legs for beehives. The idea is new to me, and there appears to be much in its favour. The legs would be detachable and would stand firm when screwed in, and a further advantage is they would not offer the most tempting means to ants and earwigs for getting within the hives, and how easy a matter it would be standing them in paraffin as a means of keeping those pests at bay. I may be wrong, but I am of the opinion that every hive might with advantage possess legs of iron. True they might rust, but not rot. Those who have found a hive-leg rotted down seven-ninths of an inch shorter than its fellows and have spent some warm moments with bits of slate in trying to get the spirit level on the hive top or floor board to find its equilibrium, will appreciate non-rotting legs. Make a note of it.

The year is fast speeding on, and what hopes we have for 1922! If only we could get rain—we need a deluge in these parts. The hazel catkins are appearing, the aconites are beginning to show, and the best of our queens will soon be laying; in fact, some have not ceased to deposit eggs in the central cells. A prosperous New Year to all, and a capacity to use it and health to enjoy it. Cheerio!—E. F. HEMMING, Steeple Gidding, December 24, 1921.

Bees and Their Fancies.

I am not quite sure whether I know more about the bees than they know about me. Circulating in my veins must be quite a quantity of formic acid, which certain bees have chosen to deposit beneath my epidermis from time to time. I have not yet discovered the way to get my own back, so must be content to leave their sister bees to meet out just punishment to the transgressors when they arrive home minus their barbed appendage.

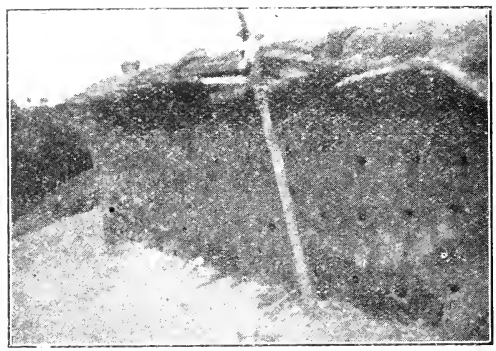
Strangely enough, when I have been going around the apiary with Daddy carrying his hive index-cards, and sometimes arms full of candy, the bees have left me alone, but when I go stalking sparrows with an air-gun they object. Perhaps they think I am pointing at them! Now, unless you should think I get stung several times a year, I hasten to say that the proportion of stings I receive is one to every hundred thousand bees—so much for the stings!

On the dresser I notice several piles of candy. How lucky to have sweet stuff to go at *ad lib.*, and what a capacity for consuming food bees must have. Think of it: six pounds of candy to a hive, which has already several pounds of sealed honey—a bee must consume her weight four or five times over between September and March. But, then, I suppose we do the same thing. Should we, if we had as quiet a time as bees in winter? We have seen many bees flying during these holidays, they appear to have a decided fancy for harness polish. What attracts them in this substance I cannot tell, unless beeswax is used in its composition, in which case they may recognise a familiar smell, or go to the harness room to weep over the way men desecrate their productions. Another fancy of these inquisitive insects is the Juniper tree, not that they sit down beneath it like the prophet of old, but go nosing among its branches, perhaps hoping ravens or some other birds, might bring them some honey for their consumption! One more handwriting from the familiar source. When you want an editorial staff beware!—MARY HEMMING, Steeple Gidding.

Bees in Palestine and Cyprus.

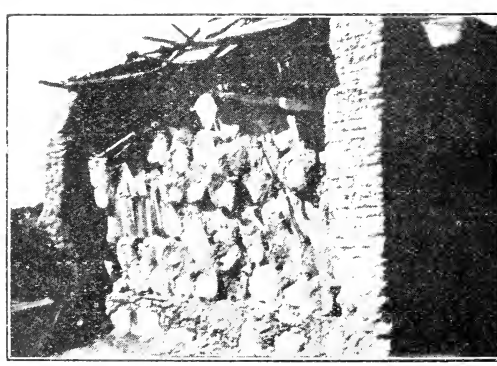
By Sergt. A. G. Carpenter.

Before I start this bee yarn I must ask you to excuse me if I make a long tale of it, for writing accounts are out of my line altogether, but no doubt you will be able to extract one or two notes of interest for The British Bee Journal, to which I feel honoured to be able to contribute the smallest item.



Mud Bee House, Lifkonico, Cyprus.

I went overseas early in 1916, and was moving about from place to place up till early in 1920, when I returned to the Homeland. I was with the R.A.S.C., M.T., the whole time, and managed to get a fair look round the country. For many months I never saw a bee, till one day, seated in the shade of my tent at Rafa, one came along and settled near by. I was roused by her merry hum, being quite distinct from the buzz of the beastly fly so common in the East, and, glancing around, I soon spotted her. I tried to trace her to the hive, but failed, for she must have come from a great way off, as the desert was bare for miles around and the nearest Bedouin camp was five miles away, so she could not have come from there. I never saw another bee till I got to Ludd. It was in the spring, and quite a number of bees were flying around in the olive grove where our camp was situated. The first few hours off duty there I hunted all over the village, also Ramleh, but not a hive could I find anywhere. I was told at a place called Wilhelma there were a lot of hives, so one Sunday afternoon I tracked off to see them. On reaching there I found a fairly big covered apiary of some 200 hives situated in the middle of a garden of banana, orange, and various other trees.

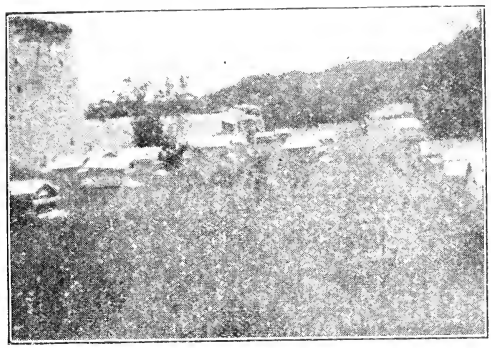


Bee House, Morphou.

The village had been occupied by German Jews, and probably the apiary was owned by a German bee-keeper. Only a few hives remained occupied, the remainder, full of old combs and dead bees, had the appearance of having been starved out. The hives

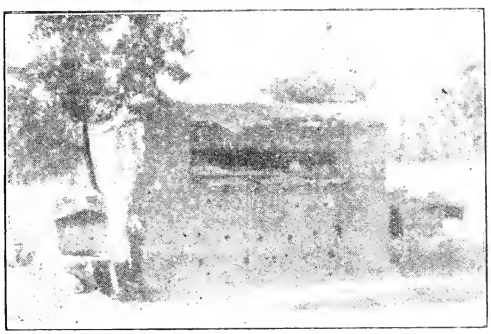
were arranged in rows on three sides of the building; just plain boxes packed like cases in a warehouse. They were made with two straight sides about 2 ft. 6 in. by 1 ft. 3 in. wide of ¾ in. stuff. The front was one straight board with—I believe—two tee-holes cut in it, one at the bottom and one half-way up, about 2½ in. by ⅜ in. The back consisted of two glass screens hung in slots, giving a clear view of the interior of the hive. The hive was divided by a board with a small piece cut out covered with excluder zinc, giving the workers free access to either top or bottom, which, with the board, formed like two brood chambers. The frames were about 14 in. long by 10 in. deep, and were hung in grooves cut in sides of hive; the top bar had ¼ in. extensions, which formed the hangers. Distance pieces on frames were made of strips of tin: other strips were used to hold the combs. I don't know the strain of bees, but they were very irritable under the conditions they were existing in.

My next ramble was N.E. of Ludd, to a village some 4½ kilos. away. I am not sure of the name, whether it was Bút-Nabala or Medjel-Yaba; but here I found quite a modern farm of cattle, poultry, and bees, also plenty of fruit trees, the property of some French Jews. Owing to the absence of any person belonging to the place, I was unable to get a look round, so I had to be content with what I could see from the out-



"Municipal" Bee Farm, Aganthon, Cyprus.

side. The hives were all standard size, and stained with some kind of stuff stone colour; they resembled the W.B.C. hive, except for the alighting board and porch, which were both hinged, and the roof was very shallow; in fact, they had the appearance of having been made for shipment, for on all sides everything had been made flush with the body, the roof had no overlap, and the fillets on the lifts were very narrow. In the sides of the hive holes were cut about 1½ in. diam., covered with perforated zinc, and a tin slide to close it up. I regret both photographs of these and Wil-

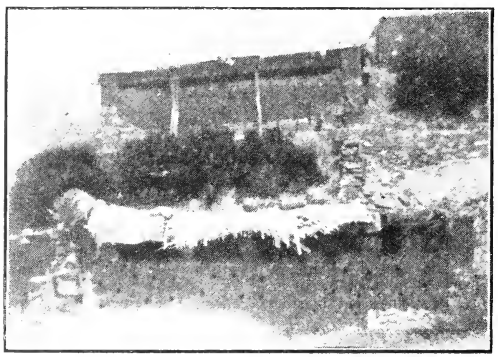


Mud and Wooden Hives, Cyprus.

helma were under-exposed, and it was impossible to do anything with the films.

I never saw any bees in any other part of the district I went to, either in Jerusalem, Jericho, Jaffa, or any of those places. In Nazareth I saw what looked to have been old hives, but only in a church by Mary's Well did I ever see a bee. Here in the church they must have been holding a festival amongst themselves, for there were some thousands humming around in the gallery and roof. The caretaker of the church wanted me to go to the other side of the village, where he said there were a lot more, but I had not the time to spare just then. Anyhow, on reaching Cana I made another halt, as there was a fresh water spring there, and whilst filling my radiator a Syrian lady invited me into her house to have refreshments. This I gladly accepted, and she made me tea and gave me bread and honey. I inquired if they kept bees, and her husband took me into his garden, where was a big mound of earth, with 24 hives of the mud cylinder pattern in it. I took a photograph of it, with him standing by, but it was too shaded and again under-exposed. The bees were very busy, and the Syrian bee-master was very proud of his apiary, which certainly appeared to be healthy and very strong. Here in this same garden was an up-to-date flour mill and olive crushing mill driven by an English stationary engine, but, owing to the war, it had got into bad working order, as no spare parts could be obtained to renew the worn ones. I always made a point of having a peep at the bees whenever I passed through Cana, and if I missed calling in the old chap wanted to know why I had not stopped, and I had to rake up some excuse. I never saw any more bees up that way in Damascus, Beyrut, or anywhere on the Lebanon Hills.

(To be continued.)



A Mud Hive Apiary, Aganthon, Cyprus.

The Sweet Clovers.

To the Editor of the *British Bee Journal*.

Dear Sir,—Since the publication in your issue of September 22 last of my short note respecting the sweet clovers, I have had too many inquiries to answer individually.

The subject is evidently of great interest to many at home, and I should be greatly obliged if you would be good enough to publish, by way of answer, in your next issue, the enclosed short account of these plants.

With the best of wishes for Christmas and the New Year.

Hubam Clover, Melilotus Alba, Melilotus Officinalis.

(By P. Wilfrid Chapman, Wykeham Ranch, Enderby, B.C.)

Varieties.—The sweet clovers belong to the genus Melilotus, often called Melilots, and comprise a number of leguminous plants having a very pronounced sweet odour. They are closely related to Alfalfa or Lucerne, but have little in common with the true clovers—Red, White Dutch, and Alsike.

Hitherto two varieties have been grown—the white-blossomed, Melilotus alba, and the yellow-blossomed, Melilotus officinalis. These are biennials, *i.e.*, they live two years only.

Recently a third has been discovered—an annual—called by various names—annual White Sweet Clover and Wonder Clover. The official name is Hubam Clover.

Characteristics.—Melilotus officinalis bears a yellow blossom; it makes the least growth, 3-5 ft.; produces least hay; is poorest of the three as a fertiliser.

Consequently it is not such a favourite as Melilotus alba, the white-flowered biennial. This grows to a height of 4-8 ft.; it gives two cuttings of hay and is a wonderful fertilising plant.

Origin and Distribution.—Sweet clover is a native of Asia, introduced into Europe some

2,000 years ago, and was brought to America about the middle of the eighteenth century. It has been common to Eastern Canada for some years, but is only now finding favour in the West.

Soils.—It grows splendidly in almost any kind of soil; even on dry soils, on sandy soils, soils that are sour, stiff clay soils, and even on alkali soils.

Root System.—The hardest soils are easily penetrated to a great depth by a strong fleshy taproot with numerous branches, which decay readily after the second year's growth. It has been estimated that the weight of roots per acre is 20 tons.

Like other leguminous plants, these roots have the ability to store up nitrogen from the air in the form of nodules, identical with those found on Alfalfa roots.

What an immense benefit to an acre of land must the 20 tons of nitrate-bearing roots be, when they decay at the end of the second year!

Annual Variety.—The annual variety, officially named Hubam Clover, with a white blossom, was recently discovered by a professor at one of the agricultural stations in the United States. Among 500 experimental seed plots it was noticed that several plants made an extraordinary growth of four feet in four months, then began to blossom and to set seed.

All seeds were carefully gathered, and another series of trial plots sown. The annual and other characteristics of the plants repeated themselves, and eventually further trial seed plots were made under various conditions of climate and soil.

Distribution of seed was made to many a distant clime, and the results were astounding. Since then the average sown to seed has been steadily increasing, and within a year or two large quantities of it will be available for distribution through the various seed merchants.

To the agriculturist, sufficient to say in this short note that it will be found to be of inestimable value as pasture, fodder and fertilising agent.

To the bee-keeper it will be of no less value.

Here at Wykeham the plot was sown on April 27; by July 15 the plants had reached a height of four feet, and were blooming freely. By the end of September they were eight feet high, uninjured by slight frosts, loaded with seed, and still blooming freely. And this under ordinary methods of cultivation!

Unlike Alfalfa and the true clovers, it makes no crown, but has the habit of forming one long central stem with numerous branches, each bearing a long raceme of white flowers, deliciously scented. On a warm, moist day the perfume was absolutely intoxicating. Never before had the writer actually realised how intoxicating the perfume of a flower could be!

If it has (and I believe it has) the same effect upon the olfactory nerves of the bee, then I can readily understand whence and why came the innumerable army of bees of all descriptions to sip of its gorgeous sweets. From early in the morning until late in the afternoon the ceaseless song of the myriads of these insects ascended to heaven in one long unbroken pæan of praise!

The uniformity of growth was remarkable, each plant seeming to vie with its neighbour in climbing up into the world.

In America the practice has been to sow it in the spring and in the fall, either alone or with a nurse crop of oats, wheat, or barley.

When sown alone eight pounds to the acre has been found the most advantageous at the spring sowing, with an extra pound or two if sown in the fall.

Like some other legumes, the seed has a very hard coat, often resulting in a very poor germination, as low as 34 per cent. After this coat has been scarified in a machine for the purpose, a germination as high as 91 per cent. is obtained.

The crop is not yet being handled by the seed merchants; it is in the hands of farmers and others for purposes of increase.

In response to the many inquiries from persons in the British Isles, the writer has secured a small quantity of scarified seed from the original source, and is reserving it for distribution at cost price:—

12s. per lb.
6s. 6d. per ½ lb.
3s. 6d. per ¼ lb.
1s. per oz.

Cash with order. Postage extra.

English stamps and postal and money orders are not negotiable in Canada. Drafts on Canadian Bank of Commerce at Salmon Arm, B.C., preferred.

The quantity of seed is very limited, and orders will be despatched in rotation.

Clippings from Clay Cross.

Bees in an Old Can.—In "B.B.J.," December 15, p. 589, your contributor gives us an instance of bees being found in an unusual position, viz, the inside of an old and discarded tin vessel of three or four gallons capacity, and in conclusion asks if either the editors or any readers of the "B.B.J." have known of a similar incident. I say yes, as I remember over 35 years ago at least, a similar old can having been thrown away and lying at the foot of the slope of an embankment on the outside edge of the Avenue Colliery Sidings, near Chesterfield, near to the Mill Lane crossing. The guard of a train which was being made up at the sidings happened to notice some bees issuing in and out of the neck of the vessel, so made further investigation, and found that a strong swarm had taken possession, and as, fortunately, he was a beeman, he knew how to proceed to convert his find into personal property, which he did without delay.

"*B.B.J.*," *December 8, p.* 571.—We have reference to a question and answer which appeared in the Question Box column of

Children's Newspaper. The question was noted by myself, as was also the unsatisfactory and altogether misleading answer. There was very little need to wonder (as Mr. Hemming did) "who answered the question," as we might safely say that very few people indeed have the slightest conception of the rate of increase in insect life in general, or even of bees in particular. The answer to the question, as given was, "If a bee-keeper started with 5,000 bees he would hope, if his stock continued healthy, to have 50,000 descendants at the end of five years." Mr. H. then asks, "What race of bees increases at such a prodigious rate?" Well, I should say that Humble bees do in one year, and with a good surplus over, and instead of giving some enlightenment to the uninitiated this manner of dealing with the item referred to results only in the confusion being worse confounded, and the chance of disseminating a little correct and useful knowledge was lost. To those who may appreciate the information it would be interesting to learn that a queen bee of moderate productive powers will lay in summer 2,000 eggs a day, and continue to do so, and that at the end of a 21 days' interval each egg produces a perfect bee, and thus the 50,000 are realised as the product of 25 days only. I do not presume to inform old bee-keepers by this, but the question and answer show how much ignorance prevails as to bees generally, but Mr. Hemming's attitude puzzled me.

Black and Shiny Bees.—Various opinions have found expression in the columns of "B.B.J." recently dealing with the above, and different views have been given to account for the bees being shiny and devoid of hair on their backs. It does not seem to have occurred to anyone yet in discussing this point that the bees may be appearing black by reason of the removal and loss of the brown hair which they originally carried. It also seems to have escaped notice that the loss of this hair may be, and I venture to say is, lost by friction, just as a horse's hair is worn down quite close to the skin where the harness happens to rub and chafe day after day. When we take notice of the combs after being fully worked out and capped, we find that it is impossible for the bees to move about between such combs without being more or less in contact with the bees on the adjacent comb, and not only so, but frequently and continually the movement will be, as we should say, on the "wrong way of the wool," there need be no surprise that the older members of the community should show signs of wear, just as ragged wings show the wear and tear of a busy and strenuous life.—GEO. GRIFFIN, Parkside, Clay Cross, December 24.

"Bee Journals" and "Records" for Disposal.

The Rev. A. Hay Halley, Crathie, Wellington College, Berks, writes: "I shall be glad to hear of any one wanting back numbers of the BEE JOURNAL and RECORD, and will be glad to send them on if the carriage is paid.

CORRESPONDENCE.

Evergreen for Hedge.

[10614] *Re* letter in "B.B.J." (10613) name of evergreen. The best evergreen I know of is *Veronica salicifolia*, or willow leaf veronica, it can be kept trimmed or let grow free, and the bees are very fond of it.

I can supply cuttings of same if necessary, but I believe it can be got from a nursery, and is very easily grown and quickly; it flowers with me nearly all the year round.—R. LANE, Llantysilio Hall, Llangollen.

[10615] May I suggest gorse for the evergreen wanted by Mr. D. Jones (10613). I have seen hedges made of it; they are not unsightly at any time, and certainly ornamental when in flower.

Another suggestion is some one of the many kinds of berberis, but I do not know if bees care for it.

One objection to the gorse occurs to me—that is, the bees may take a fancy to swarm on it. This happened once in my experience, and a painful experience it was.—(Mrs.) L. DAVIES.

[10616] In answer to Mr. D. Jones with regard to an evergreen hedge that will give flowers for bees, I can recommend the enclosed, Rosemarinus by name. As you see, the piece enclosed has one flower open now, and is one mass of flower buds. The flowering season is spring and early summer. My bees revel in it. I have a few plants; if the writer requires any, the Editor will give him my name.—"HENRI."

[The cuttings sent have, as our correspondent remarks, a mass of flower buds; there appears to be one at the base of every leaf.—EDS.]

[10617] In reply to Mr. D. Jones (10,613), the only evergreen hedge that I have seen bees working on freely is one of oval-leaved laurel. What they get from the under side of the leaves of this laurel I have not been able to discover, but it is something they like, or there would not be so many of them on it for several weeks every spring. Such evergreens as flower are prevented from being of much service, as the clipping checks the inflorescence.—F. T. PAUL.

[The bees collect a sweet sap that exudes from punctures on the midrib on the under sides of the leaves.—EDS.]

[10618] In reply to 10615, D. Jones, Carmarthen, some of these shrubs should suit his purpose:—Laurustinus, Berberis macrophilla, Berberis Darwiniana; also holly, if not trimmed too close.

Olearia Haastii, a dense but not over tall plant, would do very well on a bank. The

above are all evergreen flowering shrubs, are bee favourites, and good to look upon. There are several other suitable plants, but the above are easy to obtain and the price reasonable.—W. BROADHURST, Alperton.

[10619] In reply to D. Jones, p. 614 (10,613), Evergreen Escheloniа, will fulfil all he requires. It blooms with both white and pink, but white is the best bloomer, and grows in abundance in N. Devon round Ilfracombe.—J. PEARMAN.

[10620] In answer to query 10,613, Rosemary is slow growing, but it is evergreen, early in bloom, and the bees love it; or Cotoneaster horizontalis, though not an evergreen, it is quick growing, a good bee plant, and keeps the autumn foliage till the new green appears; or Box Handsworthi, close growing and erect, also good for bees and an evergreen.—L. FLUTTER (Mrs.).

[Several other correspondents also suggest Lauristinus.—EDS.]

Spread of Foul Brood.

[10621] I was pleased to see in your Editorial a warning against the spread of foul brood.

I take it that, owing to the prevalence of "I.O.W." disease and the trouble consequent to it, F.B. has been nearly forgotten, and in the anxiety of watching for the symptoms of one disease, the other has been overlooked. In any case, I find in my travels a very decided increase in the number of stocks affected with F.B., and would like to impress on bee-keepers the old fact that prevention is better than cure.

In my own apiary I keep Apicure in constant use, and, so far, have not had a single cell affected. I firmly believe that if every bee-keeper saw to it that their hives *always* had this preparation on the floorboards we should soon see the last of this disease.—G. JAMES FLASHMAN.

Warwicks Bee-Keepers's Association

[10622] I read with interest the letter 10595, by Mr. Goldsmith, December 22, who has a more genuine grievance against the W.B.A. than myself, he being a member with some knowledge of the inner workings of the Association.

After reading the above-mentioned letter I cannot take Mr. Allcock's advice and join the W.B.A.

If the annual meeting in 1918 only drew eight members, seven of those being committee men, what would it draw to-day? I can quite understand the difficulty Mr. Goldsmith would have in pressing his views with the whole of those seven members against him.

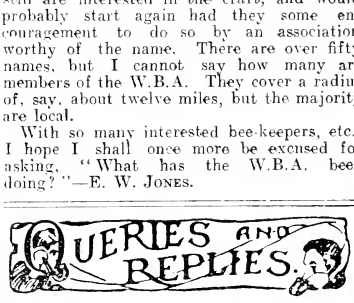
I cannot realise that an "Expert" of the best order would visit a member at so late an hour as 7 p.m., especially as it was practically dark. No wonder he was not allowed to examine bees that evening.

I am not quite in accord with the whole of Mr. Goldsmith's letter. He asks, what is to be done with an association like this, and then goes on to blame the members, if there are any. This, I think, is somewhat severe on any members who probably were unable to attend, and possibly many members who knew nothing of what, and where the meeting was to take place.

What a different association we might have had to-day had Mr. Goldsmith's first impulse materialised, and cleared out the lot. It might have been worth calling an association. It certainly is what is at present wanted

Mr. Goldsmith will be pleased to know I have made inquiries and compiled a list of bee-keepers and those who have been and still are interested in the craft, and would probably start again had they some encouragement to do so by an association worthy of the name. There are over fifty names, but I cannot say how many are members of the W.B.A. They cover a radius of, say, about twelve miles, but the majority are local.

With so many interested bee-keepers, etc., I hope I shall once more be excused for asking, "What has the W.B.A. been doing?"—E. W. JONES.



Transferring Bees from Braced Combs.

[9935] I am taking the liberty of asking you for a little advice. I bought a swarm of bees which had settled in an old hive on two sets of shallow combs, which were all braced together, and should like to get them off on to deep frames in the spring, if lucky to winter, which I think they will, as they seem very strong and with plenty of food at present. If you could give me a bit of advice as how to do it, also the best time, I shall be very pleased.

I have another stock, which shows quite a number of drones. On looking through the hive before covering down for the winter I noticed quite a lot of drone brood, and a nice queen living then, so are they necessarily queenless? I have been a little bit doubtful about this stock, as they lost their queen in July, and reared another, but, of course, I am a novice, and this is my second attempt at bee-keeping, last year losing all my bees. With a little advice I hope to do better this time. I am a regular reader of the BRITISH BEE JOURNAL, which I value very much, and always look forward to it coming. So if you could give me the necessary advice through your valuable paper I should be more than thankful. T. W. S., ASHOVER.

REPLY.—As soon as the bees begin to get crowded on their present combs in the spring, which may be towards the end of April, or early in May, place a brood box filled with standard frames, wired, and fitted with full sheets of foundation under

them. When new combs are drawn out, and contain brood, make certain the queen is on one of them, and place a queen excluder over her, replace the old combs, and allow them to stay on for about three weeks, in that time the brood will have emerged. A super clearer may then be placed under them, and when clear of bees they may be removed and dealt with. Another super may be needed before this; if so, it should be placed under the old combs, and over the queen excluder. In any case another should be placed under the super clearer to provide accommodation for the bees from the old combs

In the other case the queen may have failed to mate, and is, therefore, a drone breeder. Examine them the first warm day towards the end of March, only make a short examination, do not try to find the queen, but look at the brood, if it is worker all is well, if drone the queen must be replaced as soon as possible, or removed, and the bees united to another colony. The last is the better plan.

Notices to Correspondents

L J. (Shirley).—*Ventilation when moving bees.*—It is quite possible that by the end of March, when the bees are to be moved, the colonies may be fairly strong. For a colony covering five combs, if the reversible floor board is in the summer position and the entrance covered with perforated zinc, we should give a space of about 4 in. x 4 in. covered with perforated zinc at the top, and would increase the area of top ventilation an inch each way for each extra comb well covered by bees.

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PAIRS of young Bantams.—PRYOR, Breachwood Green, Welwyn. a.27

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COMPLETE MODERN APIARY FOR SALE, consisting of 40 strong Italian Stocks (1921 Queens), in nearly new 13-frame Hives, zinc-covered roofs, each hive fitted with excluder and two supers; 4-frame Extractor, Ripener, Feeders, etc.; carriage paid in Great Britain; April delivery; £300, or near offer.—Box 48, B.B.J. Office, 23, Bedford Street, Strand, W.C.2. w.11

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And remember ! I *guarantee* delivery in perfect condition, within the week agreed, of more than your money's worth or a new queen ! Order to-day—cheques, notes or British money orders by registered mail. Last year hundreds wrote too late—why wait ?

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Aux Sieyes, par Digne, Basses Alpes, France.

The Bee-Keepers' Calendar.

JANUARY, 1922

19 Thursday. "But the bee and the beamlike ephemeris,
Whose path is the lightning's, and soft moths that kiss
The sweet lips of the flowers, and harm not, did she
Make her attendant angels be."
P. B. Shelley, "The Sensitive Plant."

20 Friday. "To her it was summer, with bees in the air—
To me it was winter weather."—*E. W. Wilcox, "Her Reverie."*

21 Saturday. "Now hear the history of heaven-dropped honey,
A boon divine."—*Virgil, Georgics, Book IV.*

22 Sunday. "Butter and honey shall he eat, that he may know to refuse the evil and choose the good."—*Isaiah* vii. 15.

23 Monday. "Go, cheerful as yon humming bees,
To labour as to play."—*J. G. Whittier, "A Lay of Old Time."*

24 Tuesday. "You would say that each hair of his beard was alive,
And his fingers are busy as bees in a hive."
Wordsworth, "The Farmer of Tilsbury Vale."

25 Wednesday. "A flock of sheep that leisurely pass by,
One after one; the sound of rain, and bees
Murmuring; the fall of rivers, winds and seas,
Smooth fields, white sheets of water, and pure sky;
I have thought of all by turns, and yet do lie
Sleepless!"—*Wordsworth, "To Sleep."*

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Seasonable Hints.

Since our last issue there has been a decided change in weather conditions, and we have been having what is known as "seasonable" weather. The storm appears to have been general over the whole country. We have heard of other parts, some of the eastern counties particularly, having a heavy fall of snow weeks ago, in our own district we have been free until last Sunday's storm of snow and half a gale of wind. Those who had made their hives secure would have an easy mind, but it will be well to examine the quilts. It is astonishing how snow, driven by a high wind, will penetrate through the

smallest crack, and an appreciable amount will drift through ventilation holes in the hive roof. Dry snow on the roofs will do no harm, as it is not a conductor of heat, but directly a thaw sets in it should be cleared off. Alighting boards should also be cleared. A watch should be kept for the depredations of mice and tits. The former are very persistent, and will often attempt to gnaw a passage into wooden hives, the straw of skeps is an easy proposition, and they will eat through it anywhere. Those who are keeping a few Dutch skeps of bees may find it necessary to stand them inside wooden hives or boxes. A piece of fine mesh wire netting over the porch and alighting board will keep tits away.

A Dorset Yarn.

"False knowledge consists in thinking we know what we do not know."

During the years that are gone one has heard this quotation many times; have seen it in books, where it is quoted as a stimulus to acquire greater knowledge. Honey production as a means of livelihood is one of the businesses in which it is important to have a real knowledge of what bees will do, and what they will feed on at different times of the year. Books will give that which is best for surplus harvest; books give the best place to establish an apiary. In some parts of Dorset there are lines of lime trees planted for the pleasures of the wealthy, both the red twigged variety and the large flowering one; bees seem to get as much honey from one as the other. As a plant for surplus honey this gives a heavy harvest at one time, but they are generally in big parks where there are only the wild flowers among the pasture, from many of which bees get nectar, like the Hawkbit, Devil's Bit, etc. The clovers that bees get so much from do not grow well with many trees; they are to be found in pastures that have been enriched with the excrement of animals fed on cakes and meals for milk production; they will grow on open Downs, but if there are sheep there will be very little for bees—the sheep bite so close that the greater part of flowers are eaten off, so that few will ever bloom at all. Now where there are arable fields, where wheat, barley and oats are grown, these are sure to have the wild charlock in great abundance. Though our big farmers have bought the latest machines for destroying this pernicious weed, it still flourishes in our fields. The plant comes up with the autumn sown wheat, it will grow with the spring-sown corn and carry on a long time in bloom. Then, again, it will be with the mangels, with the swedes and turnips, and some will escape the hoe, and bloom for the bees. These places I consider the best for bees, as they will get a continuous honey flow. Books will advise the bee-keeper to get his population strong early; this can only be done by plenty of stores. If bees do not build up quickly in the early months of the year they cannot harvest the surplus honey. In some places after the upland grass and clovers are cut there are not so many eggs laid by the queen—quantities of eggs seem to be only when there is abundance of food to be harvested. Read well the guide-books, even if you have been successful with surplus honey, do not think you know all about the honey harvest. Remember the brief quotation at the head "False knowledge consists in thinking we know what we do not know."

The dual queen hives of the writer in the JOURNAL from the Gretna Green area is a system worth trying, but the teaching of men who have produced such quantities of surplus honey which are given in books on this subject will be the greatest help to all. It is on record that fifty stocks in America yielded 3 tons of honey. My gallant friend, John Rosser, of Tambrene, Australia, had 30 tons from his 300 colonies. (His wife owned 200 and himself 100.)

One book tells us "When running for honey, colonies cannot be too strong"; another will give the same advice only in other words. This, then, is the principal aim for all bee-keepers who go in for honey production as a means of livelihood. It is not the numbers of hives but the strength of each colony that counts. A few strong hives will give more surplus than fifty weak ones. Another matter on which all books agree is that of swarming. Successive swarming is against surplus honey. When bees swarm the population is reduced so much that the surplus racks stand "marking time" till the thousands of young bees emerge from the cells.

To have stocks strong when the flowers are plentiful should be the first aim of the bee-keeper. All writers are unanimous on this. If the queen will only lay the most eggs when there are plenty of stores, as all writers teach us, it is up to us to get our stocks strong as early as possible. Books tell you to feed liberally, candy in winter, sugar syrup in spring. At our little farm we have found this advice sound; bees are somewhat conservative; even though all the outside combs are heavy with honey they do not often use it up in the early months of the year; they always seem to want to have a reserve of food on hand. Books will tell you to scratch some of the capping over the honey with a hat-pin to induce the bees to use more stores, as they cannot resist the honey when the cap is broken. We do not do this till the days lengthen and the sun has power; we must use soft candy in the early months of the year. We find that they will continuously feed unless we have a spell of frost

The second Sunday in January, 1922. bees were to be seen from all hives bringing out the old bees that had gone under; the hives had a clear hum within, which showed that the whole of them were active, and when active they will be feeding liberally. Books tell us if weather is warm the queen begins a small patch of eggs in January; to keep

these warm and the young larvæ growing bees must consume their stores. If a large cake of soft candy is over the feed hole bees will be continuously feeding. They seem to moisten it with saliva from the stores in the glands that contain this digestive matter; this moisture goes through the divisions of the tongue, and the candy is absorbed into the honey sack. A cake of candy can be placed immediately over the brood nest, but when syrup is given, I do not think it is best to put it immediately over the brood nest, but more towards one corner, so that if the bottle feeder should let the syrup through faster than bees can consume it and take it down it would not be falling on the bees immediately over the young larvæ. It is only food that makes warmth; warm syrup in little lots if weather is warm is a great stimulus to bees, because it has the moisture in it; the bees have not to draw so much on the salivary glands for moisture. Books are the best guides for all novices; if the life of the bee is studied well and thoroughly there will not be so many failures in securing surplus honey.

The flowers of the New Year are Christmas roses. These have abundance of pollen, and some writers say nectar. I have written in detail of these each year for several seasons, but there is no doubt about the great amount of food for bees in them. They get this over a long time, as they bloom up till March. The flowers have such a lot of pollen—our bees take away every morsel, the stamens are made bare by thousands of bees as the weeks go by—they bloom close to the ground, the pollen must always be somewhat moist and easily laden on the pollen baskets. Books tell us that pollen is cleaned off the body by the legs, and has to be moistened with honey in order to make it adhere to the corbicula on the tibia. We grow a large batch of Christmas roses on a border facing east, with an 8ft. wall at the back; they scarcely ever get any sun to dry the pollen much, so it must be harvested in a moist condition. The petals are white, the pollen yellow, the roots are black. I assume this is how it gets its second name of "Niger"; the full name is "Heleborus Niger." There are some very fine hybrids raised from this one, which have shades of colour with the white. There are other helebores with somewhat different growth that bloom later, but this one is thought a lot of at Christmas time.—J. J. KETTLE

Jottings from Huntingdonshire

At the time of writing I look out and see snow, which has fallen overnight; it lies some 2 in. thick. A cold thaw has set in, so one at once thinks of the hives, and loses no time in clearing all the wet snow from the hive roofs. If it had been freezing the snow would have been left on the roofs, but not on the alighting boards. Despite the mess the snow has made of the roads we were all glad to see it. There would be some water as it melted. We should have been still more glad had it been 2 ft. deep instead of 2 in. We are hoping February will live up to its reputation and fill the dykes. As far as this district is concerned, we have had a milder time than last winter. Last week two days of a north wind and frosts at night told its tale on the hive bees. When a warmer day appeared I saw something quite new to me. On the alighting board of one hive, inhabited by Dutch-Italians, was a collection of grubs, nymphs, and a few old bees. It told its own story. The queen was laying, and evidently on more than one comb. The cold compelled the bees to do one of two things—cluster closely and neglect some of the brood, or, in trying to keep the brood warm, themselves perish. With wonderful foresight they chose the first alternative, and allowed some of the brood to die. Needless to say, this persistent brood raising has seriously depleted the stores, and I have had to give them more candy than their earlier autumn condition led me to expect they would need.

What of the spring! Will it be early, or will we get a setback? The weather we need is a February with at least 14 wet days; a March not too windy, but sufficiently cold to hold the fruit blossom back; and an April of showers and sunshine. A very sunny May, with a June of sun and rain; a warm July and August, with occasional night showers; and then bee-keepers will be smiling from ear to ear. We do not, however, always get what we wish; we can, none the less, hope, and help the bees to help us by supplying them with candy now, syrup later on, and thus securing strong stocks for the commencement of the honey flow.

A correspondent writes me to say that he has a Dutch stock with flying drones, and concludes the queen must be laying. Ah! Flying drones in January! Dutch bees are marvellous insects, but I fear those drones must be looked on as a red light. There is danger ahead. The queen, I fear, is not; and what of the bees? Mayhap if they struggle on to March in reasonable numbers they may be saved. As I have said, Dutch bees are wonderful insects. E. F. HEMMING.

Steeple Gidding.

The "B.B.J." Ideal Candy-making Thermometer.

We have a supply of these thermometers now ready. We are also pleased to say that by arrangement with the manufacturers we are able to reduce the price and can supply plain tubes for 4s.; on brass frames 5s., both post free and packed in a neat cardboard case. We recommend the b ass frames, as the tube being protected it is not so likely to be broken. The frame is also plain, neat and easily cleaned.

The thermometer has been specially designed for candy making, and is as "fool-proof" as it is possible to make it. There are only two marks on the scale, one to which the candy should be boiled, another to show the point when it is cool enough to commence stirring. These are both engraved *on the*

glass and are *accurate*. There are no calculations to be made as on the ordinary sugar boiler's thermometer with a full scale of degrees, and not always accurate. A recipe for candy and full directions are sent out with each instrument. They can only be obtained from this office. As they are being sold at cost price it is not possible to supply appliance dealers.

If I Were a Beginner.

If, instead of being over forty years a bee-keeper, I were only at the beginning of my apicultural career, I would take as my motto, guide, and watchword: "Everything of the best." Apiculture is the best of all possible occupations. It is the best paying, as it is the healthiest of all the small cultures. It is the poetry of agriculture, a pursuit which is carried on in the purest of air, and in the brightest of sunshine, and so it should give its votaries the best of life's enjoyments. As the vocation, or avocation, which gives humanity the sweetest and choicest of heaven-sent luscious nectar, it can be regarded as the very best and most delightful pastime.

It becomes all, therefore, who engage on the industry as a pastime, a hobby, a labour of love, or a toil on which a living may wholly or partly depend, to have everything about the apiary of the best. Our bees, our hives, our appliances, our bee-books, our bee-newspapers, everything that relates to apiculture should be the very best procurable. It pays every beginner to follow this golden rule. The initial cost is not so very great relatively between the best bee goods, and those of a lower type, whereas the pleasure derived from the former is manifold.

Authorities may differ as to what goes to constitute the best bee, but there can be no two opinions that all wide-awake bee-keepers who desire full success should work for improvements tending to the possession of the very best bee of its kind procurable. Mongrels should at once be ruled out of court, so can all bees bred anyhow; and, alas! these are the majority in very many corners of our island. Now it may be taken as a truism, as a fact, as undisputable as a proposition of Euclid, that breeding counts. The beginner should, therefore, make "Excelsior" his motto—ever upward, ever onward! Every apiarist should from the start determine to discard all weeds, and even all moderate colonies, retaining only the best, or rather a selection of the very best. What I would like to see is not the best of the common bee-keeper's half-dozen colonies, or even a score, but the best of the genuine queen-breeders, best of several hundreds from which to take the eggs for queen-rearing. Then the males, on whose virility so much depends, should also be specially bred. No weakling males, no mongrel drone should be given a chance of acting as Prince Consort.

Even with all this the product of such matings should be further tested for prolificness, for honey gathering, for freedom from disease, and for half a score of other points all counting towards excellence and superior success in the apiary. Only with queens thus reared can we have the very best mothers, whatever their race, and let their colour be black, yellow, or white.

If the beginner is wise he should place his best bees into the very best hive procurable. I do not, however, claim all the virtues for any particular type of hive, as, fortunately, there are several best hives. Let them be the best! There is little difference between the price of a score or a hundred of really good hives, and the same number of secondary hives. Test both, however, by length of service, and the best, the dearest, will prove the cheaper in the end.

Then the ease and comfort obtained when handling the best is a most valuable asset. These high-class hives can always be obtained from the leading manufacturers. The very fact that these hives have become so popular, has proved a valuable aid to these firms in booming them, or rather in these hives booming themselves. They have been their own best means of advertisement. A good name has to be maintained, hence good wood, good work, and good finish can be relied on when goods are purchased from the best and most successful dealers. What a pleasure it is to manipulate such hives! Owners, bees, and produce are bound to be better when poor hives are discarded, and all bees housed in homes of the best procurable.

The man or woman beginning bee-keeping who trusts to his or her own experience and knowledge errs. There is no royal road to high excellence in apiculture. One should not only invest in the best bees, the best hives, the best appliances, but also in the best books. Here we have the wisdom of the centuries, gleaned and garnered, and with patient study all this mine of wisdom may be ours.

To enjoy bee-keeping to the full one must possess a bee-library consisting of all the new bee-books published during the last fifty years or so. If one wishes to enjoy it to a superlative degree then either one's list must include ancient works, or if this is impossible, the Associations' libraries can be tapped, a very great boon, and I wish it were better known and much more largely drawn upon. Perhaps (in parenthesis), it may be permissible to whisper to a beginner that his initial start in collecting bee-books were better if limited to less than a dozen.

The list of bee-newspapers is a short one, and may be limited to not more than four—our own BEE RECORD and BEE JOURNAL, and "Gleanings," and the "American Bee Journal." If one's income limits it to one, then take the BEE JOURNAL or the BEE RECORD. To attain the best in bee-keeping, one should not only invest in the best bee-books and bee-newspapers, but he should also endeavour to spend some time in the best apiary within his reach, where he can add to the theoretical acquirements and mere book knowledge a practical acquaintance with bees and their management and learn all about producing, preparing, packing, and selling honey to the best advantage. One is there brought into direct contact with the best bees, the best hives, the best systems. A single season in

such surroundings may supply him with more tips and more short cuts than years of patient toil at home would reveal.

As pointed out in a recent contribution, one starting is generally at the mercy of circumstances as to the site of one's apiary. It may not be always possible to settle down in the best locality, or the best location where the best forage, or rather succession of good honey flows from the choicest sources can be secured; but if one can, he should made it a chief consideration when adopting a site for his new apiary.—D. M. MACDONALD.

The Trials and Troubles of a Bee-Keeper.

BY F. TYLER-TAYLOR.

Preface to Article.

DEAR MR. EDITOR,—There is, I think, a great difference between the man who is a "bee-keeper," and the man who "keeps bees." Some people there are who should never even try to keep bees, being temperamentally unfitted, and it is better for these people—and for the bees—that they should abandon the craft, and make over their stocks to someone who loves bees for their clever little selves. The following article is purposely exaggerated, but will, I trust, explain my meaning.—F. T. T.

The man who invented bees should, if he had his deserts, be stung to death many times over, but as he has been dead for a great number of years this is impossible, therefore *Requiescat in Pace*.

I do not know for certain who the gentleman was, but have a kind of idea that his name was Virgil, and that when he wanted a "swarm" of bees he sort of dug it out from a dead cow, horse, or something equally nasty. I don't know how he did it, and I don't think anyone else does, so I suppose the secret died with him.

Well, I, like an ass, was once persuaded to take up bees, and I shall not forget in a hurry what happened when I *did* "take them up," they objected firmly but not gently, and had apparently a very strong and very *rooted* aversion to me. I thereupon tried to point out to them that I had only intended to be kind, and that they were nasty, spiteful little devils to repay me in such fashion.

However, the more I argued the point with them, the more *pointed* they became in *their* remarks, until in the end they got the best of the argument, and *I* had to be "taken up" to BED.

There I remained for several days, suffering from a painful (and also visible) form of "swelled head," which seemed to afford my numerous "friends" considerable amusement.

"Swelled head" I had undoubtedly been suffering from in imagining that I, a novice, could handle bees like a blooming expert, so I determined that before having another "go" at the little fiends, I would somehow or other make myself sting proof—I must not forget to mention here the fact that a great friend of mine, a doctor, who has kept bees for years, had told me that the creatures were as harmless as flies. I wonder what sort of flies he had in his head, he certainly had a "Bee in his bonnet." Before visiting the bees a second time, I decided to do things properly, so put on an elaborate costume consisting of a large veil—well tucked in—a thick pair of motor gloves, three extra suits, and a pair of "overalls," and so garbed, felt able to tackle any brand of bees that had ever been hatched. Followed, therefore, by an admiring crowd of relatives and "friends," I, like a knight of old, in "armour clad," advanced bravely to meet the foe. Being somewhat corpulent (by nature so endowed) and in consequence of my suit of "armour," feeling slightly top heavy, I somehow or other managed to stumble against a wheelbarrow that had been left by my careless gardener in close proximity to the hive. I barked my shins pretty badly, and then, falling heavily, managed—just my luck—to bring my head into violent contact with the said hive, and the inhabitaints thereof thinking no doubt that an earthquake was in progress, came out in their millions to investigate. Somewhat shaken, but not showing any undue alarm—so secure did I feel in my "Armour"—I stood—or was it sat?—on my dignity as much as was possible under the circumstances, and so disdained to beat a hasty and ignominious retreat. Not so the "crowd," however, which melted away in a manner that was truly marvellous. I was just then in the act of trying vainly to get out my watch, with which to time what must have been some record sprints, when I gave vent to a howl of anguish, for the little fiends had suddenly found a chink in my "armour," and were making the best of their time in seeing how many of them could sting me simultaneously, in the same place. Alas, I had neglected to secure the bottom of my trousers, and . . . . well, bed again for me, and sundry swelled heads—and other places—for some of the "crowd." During my convalescence I studied a well-known "Guide to Bee-keeping," and discovered, among other things of interest, that it was not advisable to rob the bees of all their honey, but to leave them a good supply of their natural stores. As I did not know how on earth I was to prevent them from following their own natural inclinations in this matter, I decided to follow the very sound advice given in the "Guide Book," and so left the bees to their own devices for a time.

One afternoon, however, just as I was comfortably settling down to an after dinner "siesta," the gardener's boy arrived in a state of breathless excitement with the information that: "Those darned bees o' yourn, sir, be a swarmin' on the 'edge." Being somewhat annoyed at this disturbance I replied testily: "Oh! indeed, my boy, on the edge of what?" His reply was: "Not *on* the *edge* of anythink, sir, but right *in* the 'edge, leastways there he a good bunch on 'em right in the middle o' the trojanberries."

(*To be continued.*)

A Ramble in Lincolnshire in May, 1921.

By Tom Sleight.

While spending a week by the Trent side early in May last year I had several runs round about, but this one on May 5 was a long one, in a very flat country. There being no hills to get off to walk up I was very often walking on the level to ease myself. Starting out of Grassthorpe at 10 a.m., I passed Sutton and Carlton-on-Trent, then followed the North Road through Cromwell and Muskham to Newark. Crossing the Trent outside South Muskham, I see at last they are going to build a bridge there, and do away with what has been an apology for one, and a disgrace to the greatest highway in the land for so many years.

Farther on, a large beet sugar factory was nearing completion. I wonder what amount of attraction the sweets from the beets will have for bees in that part, and whether they will be able to get a special blend of beet honey? I had a look around the old castle and grounds, where I saw some splendid beds of wallflowers, which were more or less all of a hum with bees, showing someone has a few bees in or near Newark. Yes, the old grounds looked a treat. I remember as a youth of sixteen taking a cow to the cattle market when it was held on what are now the Castle Gardens, and how dead tired I was when I got there, after chasing that beast about for five hours on the road from Crow Park, nine miles away. When crossing the G.N.R. line there, it shot up by the gate and got wedged between a fence and a waiting-room while two trains went by—it surely was some wild, that cow. Whoever has transformed that old market into the beautiful grounds they are now has great credit due to them.

I passed on up Stodman Street into the market-place, where Proctor's showmen were busy fixing up for the May Fair hirings. I lingered by the Town Hall steps, and pondered over the times I have stood there in those hirings years ago, wondering what and where my fate was going to be for another year—never two years in the same village. Perhaps that was how I learned to read the countryside like a book.

Leaving those old memories, I pass down Kirkgate and Northgate out into the country again. Never having been through Winthorpe, I turn off the Lincoln road for a while, just to see what a lovely little village it is. By the look of the houses there I should say a great many tradesmen out of Newark live there. I spied two hives in a nursery as I went along, but although I went round the village, I failed to see any more. By what I saw of the fields of clover around, it ought to be a good place for bees. Just outside the village I saw a field of barley in ear or just coming in, and I thought how early it was—only May 5.

It is quite flat open country from there to Brough and Stapleford, where I saw five empty hives. The lady said bees were too dear now to re-stock them; but dear, or not dear, they would have got some honey, for just by there I saw the best clover field in that trip. I guess it is very good land about there, for alongside the road to Norton Disney was a field of oats that I never saw equalled anywhere last year, about 25 acres, as level as a table top, and a very dark green. Turning a corner at the end of this field, I came to a bridge over the Witham. Though the morning was rather dull, the afternoon, now 2.30 p.m., opens out into one of those days of sunshine and small clouds that are a treat to be out on, so I sat down on the bridge. As it is fenced in with iron railings I had a good view both ways, also up and down the river. As the sun went behind a small cloud about half a dozen fish, big chub, would come out from under the bridge, only to dart back as soon as the sun came from behind the cloud again. It made me wonder if they could not bear the rays of the hot sun, because it *was* hot then. Two cuckoos in a tree close by were squabbling and fighting, and as I made a meal off some bread and cheese I thought whatever the coal strike had done for some, it was certainly giving me a chance to ramble about the country as I had never been able to do before. It was here I missed seeing a big bee-man close by, at Carlton-le-Moorland.

Turning to the left, I went to Bassingham, where I learnt a lot of bees used to be kept, and I should say a very good place, too: but they did not know of any there now. Leaving Bassingham, I cross the Witham again, and also pass the farm where I spent my first years as a farmer's boy; then on through Thurlby, where a small field of swedes in flower would have given early forage to bees, but I fail to locate any in the hamlet of Thurlby. A little farther on a tractor was turning the clay clods over to be baked by the sun.

(To be continued.)

Jottings.

Hive Making.—I, too, thought the Rev. Hemming had made a slip in his explanation of the breadth of hive to carry lugs of frames, and had made up some notes, but had not finished the letter. This teaching of sizes completely contradicts the experience and advice of all the best bee-keepers, including manufacturers, and surely needed more explanation at that time and place. I have found brace combs in a 7-16-in. space. However, Mr. Fox promptly and ably attached himself to the important points in this new "dispensatory" of hive improvements which the Rev. gentleman has promised to develop, we will let the matter rest there for the present. I would like to remind him though, time is flying, and hives must be prepared, especially for the beginner feeling his way in our

intricate and manifold collection of apiarian requisites.

Our Calendar.—I was rather surprised with the first instalment of this, and thought Miss Jackson had something on to offer us a motto of "advice" applicable to every day and season.

This should prove a source of very pleasant study, with the prospect of concentration on any particular gem that whets the appetite of readers of poetry, truly.

"We, the sweets of art who sip,
Or, the peak of knowledge assail to steep,
Brace with awe, or admiration,
Down all ages, in all pages—our bee."

A. H. HAMSHAR.

A Swarm of Bees Worth Hiving.

B hopeful, *B* cheerful, *B* happy, *B* kind,
B busy of body, *B* modest of mind,
B earnest, *B* truthful, *B* firm and *B* fair,
Of all mis*B*haviour *B* sure and *B*ware.
*B*think ere you stumble of what may *B*fall,
B true to yourself, and *B* faithful to all.
B brave to *B*ware of the sins that *B*set,
B sure that one sin will another *B*get.
B watchful, *B* ready, *B* open, *B* frank,
B manly to all men what e'er *B* their rank,
B just and *B* generous, *B* honest, *B* wise,
B mindful of time and *B* certain it flies:
B prudent, *B* liberal, of order *B* fond,
*B*uy less than you need *B*fore *B*uying *B*yon*d*,
B careful. *B*ut yet *B* the first to *B*stow,
B temperate, *B* steadfast, to anger *B* slow,
B thoughtful, *B* thankful, whate'er may *B*tide.
B trustful, *B* joyful, *B* cleanly *B*side.
B pleasant, *B* patient, *B* fervent in all,
B Best if you can, *B*ut *B* humble withal.
B prompt and *B* dutiful, still *B* polite.
B reverent, *B* quiet, *B* sure to *B* Bright,
B calm, *B* retiring *B* ne'er led astray,
B grateful, *B* cautious of those who *B*tray,
B tender, *B* loving, *B* good, and *B* nigh,
*B*loved shalt thou *B*, and all else shall *B* thine.

Above is a reading from an old Yorkshire paper. Being interested in bees, I thought worth while to read it, and find it is possible for this swarm to be hived by other than bee-keepers. I would be delighted if you could find space to insert it in "B.B.J.," as it would interest many.

I am interested in bees. Previous to this season I have had bees twice, but lost them each time by "I.O.W." disease. I still kept my interest in them, and this season I bought a hive and stock, and have had clover honey and also took them to the heather and had heather honey. I now have four hives of real healthy bees, and hope I will be able to manage them through the winter. I look forward to the "B.B.J." every Friday, and am thankful and also grateful for useful hints and advice I get.

Wishing your paper every success and a happy New Year to you.—C. E. HARRISON, Ash Terrace, Langley Park, Durham.

Kilmarnock and District Bee-Keepers' Association.

A very pleasant function took place in the Ossington Tea Rooms, Kilmarnock, on Saturday, December 24, 1921, when Mr. Joseph Tinsley, F.E.S., of the West of Scotland Agricultural College, was presented with a beautiful timepiece from the Kilmarnock and District Bee-keepers' Association as a token of regard and appreciation for a series of lectures delivered during the last nine weeks. Before these lectures were delivered the bee-keepers were severely handicapped for want of expert theoretical advice pertaining to their hobby, and when it was suggested last summer that a class be formed, Mr. Tinsley at once came forward at a great deal of inconvenience to himself and delivered nine lectures at the Agricultural College, not only on theory but on the practical management of bees as well.

After tea had been partaken of, ex-Bailie Whyte, who occupied the chair, in a few well-remarks, introduced Mr. R. Whyte, of Cumbernauld, who had come to Kilmarnock that afternoon for the purpose of presenting two silver medals presented by the Apis Club to the bee-keeper who gained the largest number of points for honey exhibited at the Ayrshire Agricultural Association's show, and for an essay on the management of bees.

In replying, Mr. Whyte expressed the pleasure it gave him in meeting Kilmarnock bee-keepers. In a reminiscent strain he gave a graphic account of his early experiences in bee-keeping. When he first started he had only two colonies of bees in Blantyre hives, an early form of the bar frame hive now in general use. These colonies he obtained from a well-known apiarist and naturalist, to wit, "Bee Wull." In those days, Mr. Whyte stated, bee-keeping was only in its infancy, and very little was known of the actual habits of the bees. Being a keen reader and nature student he managed, however, to overcome most of the difficulties that lay in his path. Referring to the Apis Club, of which he was one of the originators, Mr. Whyte spoke of the uphill struggle he along with a few other enthusiasts had in establishing the club and getting it on a sound footing. He also congratulated the bee-keepers in being so fortunate as to have amongst them Mr. Tinsley. Mr. Tinsley, he said, was the finest lecturer he had met in all his career as a bee-keeper. He then presented the medals to the two successful students, namely, Mr. James Cochran, Kilmarnock, and Mr. Matthew Kerr, Springside.

Mr Cochran and Mr Kerr suitably replied

The company was favoured with a song from Major D. Yuille.

Mr. J. Walker, of Kilmaurs, then addressed the company. He first spoke of the kindly interest Mr. Tinsley had taken in the local bee-keepers, and of the wisdom he had imparted to them. Having spent all his life among bees Mr. Walker had obtained a great deal of knowledge from actual experience

and observation; but great as that knowledge was, he had profited to a great extent by attending Mr. Tinsley's lectures.

Ex-Bailie Whyte then called on Mrs. Blood. In her remarks Mrs. Blood briefly alluded to the pleasure that had been derived from attending the lectures, and had much pleasure in asking Mr. Tinsley to accept the timepiece as a token of appreciation and regard from the Kilmarnock bee-keepers.

In replying, Mr. Tinsley said that it gave him great pleasure to meet the bee-keepers in a social capacity. During all the years he had been lecturing he had never presided over a more attentive and successful class than had been held at the Agricultural College. This had been particularly obvious when the essays were being adjudicated. Delivering the lectures he said, had been more of a pleasure than a duty, and he thanked the bee-keepers on behalf of Mrs. Tinsley and himself for the handsome gift.—(*Communicated.*)

Warwickshire Bee-Keepers' Association.

Lectures on bee-keeping are being given at the following places:—

January 20.—Nether Whitacre.
" 27.—Bernswell.
February 7.—Sheldon.
" 9.—Studley.
" 14.—Ilmington.
" 23.—Bedworth.

Further particulars may be obtained from the Hon. Secretary, Mr. J. R. Ingerthorpe, Knowle, Birmingham.

Harrow and District Bee-Keepers' Association.

ANNUAL MEETING.

The annual general meeting was held on January 13, at 289, Station Road, Harrow.

The minutes of the last general meeting were read and confirmed. The balance-sheet was presented, and showed a substantial balance on the right side. The Committee were instructed to go into the possibilities of establishing a library, and also for the insurance of members' bees against loss by disease.

Mr. R. E. Price was unanimously elected President, and the Association is to be congratulated on having an enthusiastic and practical bee-keeper as its President instead of the usual figurehead which is often associated with this position.

Messrs. J. L. Rogers and K. Young were elected joint Secretaries for the ensuing year.

In connection with the above Association a lantern lecture on apiculture will be given by Mr. W. Herrod-Hempsall on January 31, at Bessborough Road School, at 8 p.m.

J. L. ROGERS. } Hon. Secs.
K. YOUNG. }

Honey Imports.

The registered value of honey imported into the United Kingdom during the month of December, 1921, was £15,864.—From a return furnished by the Statistical Office, H.M. Customs.

CORRESPONDENCE.

On Mating.

[10623] I was interested in Mr. Hugh Houston's article on mating. As regards animals and poultry everyone knows about breeding; in fact, I had a sitting of Rhode Island Red eggs which were of the strain of the Rose Queen, which hatched out a bird of 222 egg-layer. Very fine cockerels were hatched. One I am putting with a Meadows strain, also a very dark red, so as to get huge layers.

Regarding drones, my drones are large black ones, who keep to their own garden, even next door there are six hives of small mongrels which do not bother them one atom. Result, when a cast comes out the queen does not fly to a great height owing to these big, strong drones who are on the watch, and the result of the mating is a wonderful queen. The blood is renewed every two years, so the stocks in their large hives are always prolific and healthy. Autumn is the time to introduce new queens, as enormous broods result. A bee-way is allowed over top of frames, so queen is not confined to one cold comb. The result in the spring is beyond description.—CYRIL TREDCROFT.

Bees Disappearing.

[10624] I was interested in the above article by Mr. Dixson *re* wasps. Firstly, did he look for nests? Secondly, nucleus hives are a bore. Get new blood from a good breeder every second year, and introduce by platform way over combs.

Regarding wasps, if small hives, use a Swiss entrance, only open to one bee space, and wasps are befuddled.

Thirdly, do away with cones in front of roof, a fine place for wasps and rain to enter. Put perforated zinc or wire cloth in its place.

Four large 12-frame hives are quite enough for one man instead of many small ones, and give 1 cwt. of honey per hive. A large hive without fittings is less expensive than a small one fitted out, and pays for the expenses laid out if bees are a prolific strain.—C. TREDCROFT.

Late Pollen Gathering.

[10625] As a bee-keeper of many years' standing, the following notes may interest your readers, coming as they do from the South of Scotland. Tuesday, December 13, with us was bright and sunny all day, a mild, genial air prevailed, and the atmosphere was more in keeping with a spring day than one in mid December. Midges were dancing about and holding high revelry, their calendar evidently being sadly out of joint. It occurred to me that I might go and have a look how the bees were doing.

Imagine my surprise to see pollen going in, to one of the hives in particular, in fairly large loads. I caught one of the laden bees in a match-box, the only handy receptacle I had on me, and took her to let a brother bee-keeper see the unique spectacle of bees carrying in pollen in mid-winter. On paying a second visit to the hives some time later I saw more pollen being carried in. The last previous date this year on which I saw pollen going in was November 25, and last year (1920) it was on November 10. Does this not constitute a record for Scotland, and can any of your readers "go one better"?—JAMES HOUSTON.

Special Prepaid Advertisements.

One Penny per Word.

Will advertisers please read these Rules carefully in order to save trouble, as they will be strictly adhered to.

Trade *advertisements of Bees, Honey, Queens, and Bee goods are not permissible at above rate, but will be inserted at* **1½d.** *per word as* **"Business"** *Announcements,* immediately under the *Private Advertisements. Advertisements of Hive-manufacturers can only be inserted at a minimum charge of* 3*s. per* ½*in., or* 5*s. per inch.*

PRIVATE ADVERTISEMENTS are only intended for readers having **Surplus Stock** *to dispose of.* **Driven Bees, Nuclei,** *and* **Queens that are reared or imported for sale,** *are Trade Advertisements, and can only be accepted under trade terms. A charge of* 6*d. extra will be made if a box number is used.*

Advertisements must reach us NOT LATER than FIRST POST on MONDAY MORNING for insertion in the "Journal" the same week.

Orders for three or more consecutive insertions in "The Bee Journal" entitle advertisers to one insertion in "The Bee-Keepers' Record" free of charge.

PRIVATE ADVERTISEMENTS.

LIMITED quantity finest Light English Honey, granulated, 14 lbs., 21s.; 28 lbs., 40s.; carriage paid; tins free; sample 6d.—CHARLES CUBLEY, Gedney, Holbeach, Lincolnshire. a.45

FINEST quality well-filled Sections Honey, glazed, 2s. each, carefully packed, on rail.—W. WOODLEY, Beedon, Newbury. a.46

PUPILS WANTED. — Opportunity to learn commercial bee-keeping, honey production, and queen-rearing, out apiaries; 150 colonies maintained.—Terms and particulars from CLARIDGE, Copford Apiary, near Colchester. r.a.47

WANTED, to rent or purchase, Cottage and Ground up to 4 acres, within 25 miles of London, preferably N.W. For Sale, six 6-frame Stocks with imported Italian or home-raised Queens, 54s. or 48s., delivery May and June.—BARRETT, Sunnyside, Cecil Park, Pinner. r.a.50

FOR SALE, 1½ cwt. of highest grade Honey, £6 per cwt. carriage forward, £6 5s. per cwt. carriage paid; sample 4d.; tins returnable.—REV. H. CROWE, Merriott, Crewkerne. a.48

CLOVER SECTIONS, £12 gross, £6 10s. ½ gross; Clover Honey, screw-cap bottles, £11 16s. gross, £6 ½ gross, 28-lb tins 1s. 6d. per lb.; tins free; f.o.r.—JOHN RUMBALL, Ayot St. Lawrence, Welwyn, Herts. a.51

WANTED, work in an apiary; live out; references exchanged; Devon preferred.—ALLCHIN, Trevone, Padstow. r.a.50

PRICE £950.—10-acre Farm for Sale, June, 1922, as a going concern, suburbs of Sydney, N.S. Wales; Poultry (500 layers), Bees and Fruit; feed shed, brooding houses, incubators, netted fowl runs, good water system; House, 3 rooms and kitchen. Another 5-acre Farm, well stocked with poultry, pigs, fruit, etc., price £800. Terms arranged if required.—Particulars, apply MRS. ELLEN PHILLIPS, Ballingarra Road, Miranda, near Sydney, N.S.W. a.49

12 STOCKS ITALIAN BEES on 8 frames, 70s. each, delivery April; guaranteed healthy.—ENNEVER, 2, Oak Avenue, Enfield. a.52

WILLOW HERB, excellent honey flower, plant now. 12 roots 2s. 6d.—BOWEN, Apiarist, Cheltenham. a.58

GUARANTEED pure Essex Honey in 12- and 28-lb. tins, 1s. 6d. lb., £7 15s. cwt.; also healthy Stocks in nearly new hives, £5 5s. each, or what offers?—TUNMER, The Apiary, Maldon. a.61

BLACK CURRANT BUSHES, two years, warranted healthy, 6s. dozen, half dozen 3s. 9d.; Gooseberries, 7s. dozen, half 4s. 6d.; post free.—SMITH, 72, Norton Street, Hockley, Birmingham. a.45

FINEST quality Light Shropshire Honey, 1s. 6d. per lb. in 28-lb. tins, carriage paid; sample 6d.—T. TUDOR, JUNR., 30, Spring Cottage, Little Drayton, Salop. a.44

HEATHER HONEY—Finest Scottish Heather Honey in bulk; packed in 28-lb. tins.—Samples and prices, WHYTE, Cumbernauld Station, Dumbartonshire. a.22

VERY finest quality Hampshire Honey for Sale; 5 cwt. in assorted size tins.—Box 60, BRITISH BEE JOURNAL, 23, Bedford Street, W.C.2. a.24

GOOD GLAZIER'S DIAMOND, perfect, 8s. 9d.; double 12-bore Breechloader, top lever, perfect, 98s. 6d.—HUBBARD, Northkilworth, Rugby. a.25

OFFERS invited for two new XL-All Hives, two deep, two shallow bodies each; also seven fitted Section Racks.—TUNNICLIFF, Barrow-on-Soar. a.28

COMPLETE MODERN APIARY FOR SALE, consisting of 40 strong Italian Stocks (1921 Queens), in nearly new 13-frame Hives, zinc-covered roofs, each hive fitted with excluder and two supers; 4-frame Extractor, Ripener, Feeders, etc.; carriage paid in Great Britain; April delivery; £500, or near offer.—Box 48, B.B.J. Office, 23, Bedford Street, Strand, W.C.2. w.11

BUSINESS ADVERTISEMENTS.
1½d. per word.

BUY YOUR BEES FROM BOWEN: Cotswold bred. Every Stock guaranteed. Circular free. a.56

SERVICE MEN! Entrust your Queen orders to a Service Queen Breeder. Best possible value given.—LIEUT. BOWEN, Bee Specialist, Cheltenham. a.57

JACK TICKELL—For Queens, Stocks and Nuclei. List free.—Westbourne Apiary, Cheltenham r.a.54

CHOICE Imported Italian Queens, May 7s. 6d., June 7s.; 3-frame Nuclei, 35s. Book now to secure these prices.—HULBERT, "Châlet," Warwick Road, Olton, Birmingham. a.59

INCOMPARABLE CREAM CANDY. — Great seller! Have you tried it? 7 lbs., 8s.; 10 lbs., 11s.—BOWEN. a.55

For best bees, queens and appliances come to PEARSON & GALE, Marlborough.

SWISS BEE STOCKS FOR SALE, headed by Queens bred from imported pedigree queens, delivery May. These Black Swiss Bees have been line bred for 40 years, the queens being mated in higher Alpine valleys, no other bees existing within miles, are as purely bred as our best strains of horses, cattle, etc. Swiss Bee Society keep stud books, issuing numbered certificates with all pedigree queens mated at official mating stations. Official numbers of my breeding queens are 564, 92/60 and 93 60. Pedigree queens are not primarily bred for honey gathering, but are used by beekeepers to raise queens for re-queening purposes, these queens through long selection being noted for freedom from swarming impulse. Workers are long lived, and, being kept at all altitudes up to a mile above sea level for honey gathering, give huge colonies, and are most resistant to weather and diseases, standing four months' continuous confinement to hives during Swiss winter without difficulty, grand honey gatherers, giving splendid white cappings to combs. All purchasers can absolutely depend on receiving the Swiss breed I advertise.—DAVIDSON, Forest Road, Burton-on-Trent. a.53

200 LBS. HONEY, 10 Stocks, from one Queen, Melton ex Simmins; proved honey producers. Queens, Stocks, Nuclei, Swarms. Book now.—MASON, Melton Apiary, Willerby, Hull. a.37

WE OFFER WITH OUR STOCKS AND NUCLEI an absolute guarantee against Acarine disease to Saturday, September 16, 1922.—Details from THE WELSH BEE GARDENS, Ashgrove, Brecon. (Proprietor, Lieut.-Colonel Weaver Price.) Really highest grade Italians. r.a.62

HONEY FOR BEE FEEDING.—Australian, two tins, about 60 lbs. each, 56s., one tin 28s., 7-lb. tins 4s. 9d. each; West Indian, two tins, about 60 lbs. each, 71s., one tin 40s., 7-lb. tins 5s. 9d. each. Carriage paid 100 miles on all orders 28 lbs. and over. Cash with order.—SOUTHWOOD, 95, Acton Vale, London, W. r.v.15

BENHALL BEES.

A LIMITED number of really good 5-frame Nuclei, headed by purely-mated 1922 Italian Queens, during May £2 10s. Cash with order. RIVIS & GRAY, Benhall, Saxmundham. r.a.7

GUARANTEED absolutely pure Light Cambridge Honey, 13-lb. tins, 18s.; 28 lb., 39s.; carriage paid; sample 4d.—J. YOUNGER, 16, Maid's Causeway, Cambridge. a.42

NUCLEI.—Am now booking orders for my noted 4-frame Nuclei; Simmins', pure Italians, or Carniolans, 55s.; Hybrids, 45s.; carriage paid; 10s. deposit on returnable box. Book early and avoid disappointment. Delivery June-July.—HOWLETT, "Sylvabelle," Tring. r.a.31

CARNIOLANS.—Buy British-bred Queens, and have less trouble with supersedure. List.—SWAFFIELD, Libertus Villas, Cheltenham. r.a.3

QUEENS by return from April till October.—PEARSON & GALE, Marlborough. w.14

WONDERFUL CARNIOLANS AT PRE-WAR PRICES.—1922 Queens, bred from the only Carniolan stock selected for more than 20 years past with great care in ensuring the best possible honey results.—SIMMINS, Queenland, Heathfield, Sussex. r.a.12

HEATHER HONEY for Sale, in small or large quantities.—PEARSON & GALE, Marlborough. r.v.51

BUCKFAST QUEENS are the very best. Our 1922 Circular will shortly be ready.—(REV.) BROTHER ADAM, Buckfast Abbey, Buckfast, S. Devon. a.6

NEW HARDY YELLOW VARIETY.—No loafers hottest days. Gathered honey 1921 after all others had retired from business.—Particulars, S. SIMMINS, Queenland, Heathfield, Sussex. r.a.13

THE WELSH BEE GARDENS, Ashgrove, Brecon (Proprietor, Lt.-Colonel Weaver Price).—Now booking Stocks and Nuclei. Highest grade Italians. r.a.15

FINEST IRISH HONEY, 84-lb. keg, £5; 7-lb. tin, 10s. 6d.; 2 lbs., 3s. 9d. Cheaper grades.—84-lb. kegs, 56s. and 28s.; ½-lb. samples, three kinds, 2s. 6d.; carriage or postage paid; packages free. Special prices to large buyers.—GEORGE WHITE & SONS, LTD., Honey Specialists, Waterford. w.22

QUALITY, NOT QUANTITY, OUR MOTTO! Never yet has our supply equalled the demand for our famous "Claridge Quality" Nuclei, notwithstanding continuous extensions to our apiary. The moral is obvious—Book your orders at once. Every Comb, every Bee in every "Claridge Quality" Nucleus is produced in our own Apiary, in our own Colonies! Your satisfaction is our reward.—CLARIDGE, "Italian Specialist," Copford Apiary, Colchester. r.w.66

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3. The "J.B." FLOOR-STAND, with improved quick confinement of bees, automatic ventilation, compact loading of hives, and facilities for treating "I.O.W" Standard with both 1 and 2.

4. COMBINATION Float or Bottle Feeder, "Isle of Wight" Disease Treatment Box, Winter Passage, and Spring Inspection APPLIANCE.

Modest advertising, and the co-operation of progressive bee-keepers to keep down overhead expenses, ensure reasonable prices.

Literature, 4d. stamps.

JAMES B. BALLANTYNE,
HAZELBANK, LANARK.
a.26

BEES AND QUEENS.—Our 1922 Catalogue now ready. Don't miss it! Free on application.—PEARSON & GALE, Marlborough. w.17

ADMINSON'S SEMI-COMBS.—We can supply Nuclei on these Combs from mid-May onwards at cheapest rates.—PEARSON & GALE, Marlborough. r.v.51

HAVE YOU READ "THE BEE WORLD"? If not, why not? Every number in itself is a useful literary work for practice and reference. Specimen copy free.—Offices: THE APIS CLUB, Port Hill House, Benson, Oxon.

CAN YOU BEAT IT?—During 1921 we sold nearly seven hundred Stocks and two thousand Queens. Next year we hope to do still better.—PEARSON & GALE, Marlborough. v.29

FINEST ENGLISH HONEY, in 28-lb. cans, 1s. 6d. per lb.; cans and carriage free.—PEARSON & GALE, Marlborough. r.14

Orders booked now for April Stocks. Catalogues now ready. PEARSON & GALE, Marlborough.

"THE APIS CLUB."—If you have a live interest in bee culture as a science and a craft, you should join THE APIS CLUB. Membership fee, 10s. 6d. per annum (*commencing month of joining*), and includes the free delivery of "THE BEE WORLD" as published.—For advantages of membership write to the Secretary, THE APIS CLUB, Benson, Oxon. r.o.37

OUR 1922 CATALOGUES of Bees and Queens are now ready. Appliance Catalogues will be available mid-January. — PEARSON & GALE, Marlborough. w.13

BOOK NOW.—Choicest Carniolan Queens for 1922.—PEARSON & GALE, Marlborough. r.v.10

9D. PER 1 LB. CANDY.—4 lbs., 4s. 6d.; 10 lbs., 9s. 9d.; post free; larger orders 9d. f.o.r.—COBB, 33, Bevan Road, Plumstead. r.a.39

The products of the Apiary, of Poultry and Farm Stock, of the Fruit and Vegetable Garden can be Advertised and Sold through

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Discount for a series of consecutive displayed advertisements:—Six insertions, 2½ per cent.; Twelve insertions, 5 per cent.; Twenty-six, 15 per cent.; Fifty-two, 30 per cent.

IN wishing all who may read this a Prosperous New Year, I have pleasure in announcing that I have taken my son into partnership.

We shall aim, as I have done in the past, to give good value, and hope that we may continue to add to our circle of customers.

Current Prices free on application.

E. J. Burtt & Son,

Manufacturers of Beekeepers' Supplies

Stroud Road, Gloucester.

(*Wholesale and Retail*)

GORDON ROWE, 28a, Moy Road, Cardiff. SELLS all kinds and grades Honeys and pure Beeswax; samples 1s. each; terms, cash. Can supply Honey Parchments, stamped "Pure Honey," 2 lbs., 14s.; 1 lb., 9s. 6d.; ½ lb., 7s. per 100; 500 lots carriage paid.

THE

British Bee-Keepers' Association.

The recognised centre of practical and scientific bee-keeping in Great Britain. Particulars and conditions of membership may be obtained from the Secretary,

W. HERROD-HEMPSALL, 23, Bedford Street, Strand, London, W.C.2.

QUEEN BEE BREEDING ESTABLISHMENT,

(Many Awards)

E. TORTORA, OZZANO EMILIA (Bologna), ITALY.

LARGE QUEEN BEE BREEDING—GUARANTEED CHOICEST PRODUCTION.

Apply for Catalogue and Price List for the 1922 Season.

1922. ITALIAN QUEEN BEES. 1922.

May and June, each 12/-; four £2 0 0; one dozen, £5 0 0.
July and Aug., each 10/-; four £1 10 0; one dozen, £4 0 0.
Sept. and Oct., each 8/-; four £1 4 0; one dozen, £3 10 0.

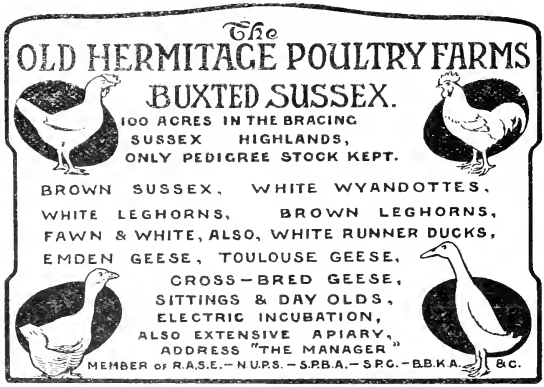
S. H. SMITH, 30, MAIDS' CAUSEWAY, CAMBRIDGE.

BEE CANDY, 7-lbs. post free 7/6 10-lbs. 10/6
Reduction for further quantities.
S. J. BALDWIN, BROMLEY, KENT.

INSTRUCTION in BEEKEEPING
PRACTICAL AND THEORETICAL

My Apiary will be open for a limited number of pupils during this season. Terms and particulars from

W. HERROD-HEMPSALL,
The W.B.C. Apiary, Old Bedford Road, Luton, Bedfordshire.



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2-lb. Glass Top Boxes, 2/2 each, post extra.
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Special Quotations for Quantities. Illustrated Catalogue Free. Established 1883.
C. T. OVERTON & SONS, CRAWLEY, Sussex.

SKIPWITH CANNELL,
The American Breeder of **American Beauty** Queens,
Aux Sieyes, par Digne, Basses Alpes, France.

Gentle as butterflies, bred for beauty, healthiness, hardiness and profit from America's most remarkable strains, the bees from my **American Beauties** are a pleasure to work with, a joy

One **American Beauty**, Guaranteed superior. May 12/- June 10/- July. 9/- } to play with, and the most profitable bees for honey.

To those desiring **Italian** Italians I can offer fertile queens at very low prices:—

An Italian queen, out of Italy's best. May 9/- June 8/- July. 7/- } not equal to my **American Beauties**, but good, honest, well-bred queens.

And remember! I *guarantee* delivery in perfect condition, within the week agreed, of more than your money's worth or a new queen! Order to-day—cheques, notes or British money orders by registered mail. Last year hundreds wrote too late—why wait?

SKIPWITH CANNELL,
The American Breeder of **American Beauty** Queens,
Aux Sieyes, par Digne, Basses Alpes, France.

The Bee-Keepers' Calendar.

JANUARY, 1922

26 Thursday. "As bees flee hame wi' lades o' treasure,
The minutes winged their way wi' pleasure."
Burns, "Tam o' Shanter."

27 Friday. "The ant and the bee are, I think, much nearer man in the understanding or faculty of adapting means to proximate ends than the elephant."—*Coleridge, "Table Talk."*

28 Saturday. "Meantime, what lights my sunbeam on?
. . . . . .
Laugh through my pane, then; solicit the bee;
Gibe him, be sure; and in midst of thy glee
Love thy queen, worship me!"
R. B. Browning, "Pippa Passes."

29 Sunday. "I will not doubt, though sorrows fall like rain
And troubles swarm like bees about a hive."
E. W. Wilcox, "Faith."

30 Monday. "And read, in half the languages of man,
His 'Rusca Apium' which with bees began,
And through the gamut of creation ran."
J. G. Whittier, "The Pennsylvania Pilgrim."

31 Tuesday. "The rising painter, Vincent Carrington,
Whom men judge hardly as bee-bonneted,
Because he holds that, paint a body well,
You paint a soul by implication."
E. B. Browning, "Aurora Leigh."

FEBRUARY, 1922.

1 Wednesday. Peep under the quilts, and if stores are short give candy. Otherwise leave the bees alone.

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British Bee-Keepers' Association.

The monthly meeting of the Council was held at 23, Bedford Street, Strand, London, W.C.2, on Thursday, January 19, 1922.

Mr. W. F. Reid presided, and there were also present Messrs. G. Bryden, G. J. Flashman, W. E. Moss, W. H. Simms, G. R. Alder, J. Herrod-Hempsall, J. B. Lamb, A. Richards; Association representatives: J. J. Kettle (Dorset), E. G. Waldock (Surrey), F. Ff. Ball (Bucks), Rev. E. F. Heming (Hunts), and F. E. L. Watts (Herts).

The minutes of the previous meeting were read and confirmed.

Letters of regret at inability to attend were read from Mrs. Newham, Miss M. D. Sillar, Messrs. T. W. Cowan, E. Walker, C. L. M. Eales, G. S. Faunch, F. W. Harper, and Rev. J. Morley Davies.

The Industrial Settlements, Preston Hall, and Mr. T. Devine were elected members.

The Soke of Peterborough, Oundle and District Association and the Hunts Association nominated representatives and they were accepted.

The annual report was presented and passed.

Arrangements for the annual meeting were made. The Hon. Secretary consented to give a popular lecture on "The Anatomy of the Honey Bee," after which, if possible, a social evening will be arranged. This was left in the hands of Mr. A. Richards and the Hon. Secretary.

The following report on the intermediate examination was received :—

To the Council, B.B.K.A.

DEAR SIRS,—I beg to report to your Council on the papers submitted to me as Examiner to decide who are qualified to pass for the intermediate certificate, and I have great pleasure in intimating that the amount of good work done is highly gratifying. A record entry of 68 candidates came forward, as against 56 last year, which until now was the highest recorded.

Of 67 who presented papers, 42 have secured marks high enough to qualify for a pass. It is very pleasant to record that of the passes a large majority have secured their certificates with marks varying in value from "Very good" to what may be considered as "Excellent," and only a very small minority qualified with marks showing only a bare pass.

Almost all the 25 failures fell very considerably below any chance of passing, but only a very few could be set down as failures out and out. Curiously, some of the easiest questions set proved the hardest to answer by candidates of this class. Careful and prolonged study should remedy the wrong by the date of next examination.

As showing the amount of interest taken in bee-keeping at the present day, it may be worth recording that a very few years ago entries for the intermediate varied from 10 to 20. Now we have the record entry of 68, and that with the fee doubled.—D. M. MACDONALD, Examiner.

It was resolved to grant intermediate certificates to the following : Ladv Katherine Bouverie, Mrs. M. E. Painter, Mrs. B. Pond, Misses M. Hanson, M. Hagman, S. Crowe, E. Taylor, J. Benson, G. Richards, M. Denney, J. Watson, P. Murgatroyd, F. Sadler, M. Cannell, D. Adam, L. France, C. Choules, M. Holmes, A. B. Flower, D. Mills, M. Jones, Rev. E. Evans, Rev. W. H. Richardson, Messrs. W. M. Sedgley, F. W. Miles, J. Evans, W. West, J. Bennett, J. Barrett, E. Willett, J. S. Barron, R. Dugid, B. Knight, A. Cornwell, C. E. Hudson, P. Ridge, J. A. Claxton, C. Hipkins, R. Sims, F. E. Bartlett, J. Lambert, and C. J. Hindle.

Correspondence was read from the Scottish Bee-Keepers' Association, Kent Bee-Keepers' Association, and the Nation's Food Exhibition, and the Hon. Secretary was instructed to deal with the same.

Next meeting of Council, February 16, 1922, at 23, Bedford Street, Strand, London, W.C.2.

A Dorset Yarn.

"Such is the patriot's boast, where'er he roam,
His first, best country ever is at home."

I have only lived in the homeland, but one of my sons who, beside the four and a-half years' "picnic" in France, has been in the United States from the State of Maine to Palm Beach in the extreme south of Florida, gives the palm to this country as the best place to live in. The pictures in the JOURNAL of bees in France read delightfully, and look prosperous, but my son, who went as far as Marseilles in France, did not consider the lot of the smallholders in that country as anything like prosperous. They work harder, live more sparely, and are worse in appearance than the farm labourers in Dorset. Every man can better his position in life by keeping bees, or *making bees keep him*, by adding to his holding things that are wanted by others. We certainly are not wise to buy foreign honey and let our own waste in the flowers because we will not take the trouble to keep bees, who will gather up this delightful sweet, and store it in plenty for us as well as themselves. First get the bees. One farmer told me last week he is *joining our association*. Make these associations live communities, there is so much that is of interest to the uninitiated. Even at the Women's Institutes men have craved for space to hear of bees. What a pity there are not more of the gentle sex to carry on the propaganda. We have had two go through the examinations for certificates, and one has passed successfully the intermediate (the male candidates failed). We shall still have to boom bees more if we want this honey harvested.

There is a fine advertisement of honey and its food value in the New Zealand Government offices in the Strand, London, just now. "Eat more honey." "One ounce of honey equals 10 eggs, 15 ozs. of fish, 12 ozs. of steak." This is an object lesson to all food reformers—the great value of honey as a food. The humblest cottager can have this delicious rich food always by keeping bees to harvest it. We in rural England have the best opportunity of getting the nectar harvested, as the flowers are everywhere around us. We, in winter, have the tree heath 10 ft. high in full blossom. There is the willow as soon as days lengthen. We have the long yellow catkins of hazels now, the alders and birches nearly as forward. Bees were out on the gorse on Sunday, the 22nd. Hazels are close by one apiary (though these are fertilised by wind when the female flowers come in February); bees have

been on the male catkins in winter, whether they get any pollen from them I cannot be sure. One does not always have a glass to see what their motions are, they certainly have pollen on the baskets, but they may have been on the gorse before going to the hazels. There is a wonderful arrangement in the male flowers of a saucer-like appendage, which collects the pollen and holds it, till it can be used for pollination so that it should not fall on the ground and be wasted—but this is getting away from the text: "The first best country ever is at home." This country produces the best honey that I have ever tasted. We can boom bees for the smallholder and the cottager, the rich can always look after themselves, anything we produce on the farm and use for ourselves is keeping down our expenditure; we shall be the richer in the end. If we buy the foreign honey or the foreign butter we are enriching some other country, and making the foreign people more happy and contented, and our own are getting more discontented. It is my opinion that if we want to keep our people contented, they must be in a position to enjoy the good things the earth produces. They can all have that in rural England; they can produce enough so that the town dwellers can have what is not wanted at home; not till then will all realise that "The first best country ever is at home!"—J. J. KETTLE.

Jottings from Huntingdonshire

Many people, judging from my correspondence, have already adopted my suggestions for making their own hives, and as I have at last answered every letter which has reached me on the subject, I feel, perforce, to add a little more information for beginners. In the first place, if anyone is finding it difficult to purchase 12-in. boards, may I suggest two boards of 6 in., tongued and grooved. In this case the grooves at the bottom will need to be puttied up, while the tongue at the top will need planing off. The object of puttying or whiteleading the bottom groove is to prevent insects making a home there—they will get in somewhere if this is not done. We shall be told that the danger of using wood tongued and grooved is the liability of damp to work through the joining by capillary attraction. This term has come to stay, and does not always mean the presence of hair by which the rain ascends over the tongue. Rain will never get through without assistance, and a strong driving wind is often all the assistance it needs. If, however, the hive so made is well painted—a paint being used which will not peel off in the sun—the storm which is going to find its way through such hive walls has yet to visit these isles. Do not, then, be frightened by the term capillary attraction. Now with regard to the space between the bottom of the frames and the floor board of the hive. In the Irish C.D.B. hive one inch is allowed, and it is, I understand, rarely, if ever, responsible for braced combs. If too little space is given, not only will it retard the bees' passage beneath the brood nest, and thus tend to prevent that freedom of movement so essential to a bee coming home laden with honey and pollen, but there will be the danger of propolising, and who in going to take out a comb of bees and finding the same securely glued to the floor-board does not feel annoyed, to say the least of it? Now with regard to the spaces between the frame-ends and the brood-box sides I have suggested $\frac{5}{8}$ of an inch as a suitable distance. I am not quite sure whether I ought at this juncture to qualify my remarks on this point. There is not a shadow of doubt that some bees will take upon themselves to build cells in these spaces, and some will not. On the other hand, some bees will propolise up the smaller spaces of, say, quarter of an inch. I do not, however, hesitate to advise beginners to adopt the $\frac{5}{8}$ space. As I have said before, it is much easier to separate frames waxed to sides than glued, and which is of more importance, the greater space allows the novice more freedom. My impression is that the bravest beginner in bee-keeping finds it difficult to return a frame to its hive so carefully grasped that a spirit level on the top bar would show that the frame was held so steadily that the air space in the spirit moved little from the centre. This may read silly to some minds. I assure you I am serious. Did none of us, when we began bee-keeping, ever kill some of those bees which unfortunately clustered around the frame-ends, which bees might have been saved had more space been allowed? Two years ago I was called to go and see some bees belonging to a beginner—they were dwindling. His hive was a new one, bought direct from one of our most reliable makers. On taking out the fourth frame I was able to show the owner what had happened. The queen had been crushed between the hive wall and the frame-end; undoubtedly done when the frame was returned at a previous manipulation. To disagree with Mr. McDonald seems like impertinence. He tells us if he were about to begin bee-keeping again, his motto would be "The best of everything." Ah! Mr. McDonald is one of those who was a beginner but never a novice. Now, dear reader, do not tell me that dictionaries tell us a beginner and a novice is one and the same thing—there is a difference, and I have knocked about most parts of this country of ours, and know that there are scores of would-be bee-keepers who take the JOURNAL, and are anxious to become members of the craft, but owing to other callings, and often physical infirmities, have no intention of becoming experts, but do intend to keep a few bees for the chief purpose of supplying their own household with honey. In the same way some people keep a few laying fowls. Those who take up bee craft and develop it will, as I have before said, develop views of their own, which may or may not agree with mine.

To close these remarks, let me say Italian

bees are bigger sinners than Dutch in combbracing here. But a friend in Kent finds the opposite to be the truth. Herein comes the question of strain, of this more anon.—E. F. HEMMING, Steeple Gidding.

The Trials and Troubles of a Bee-Keeper.

BY F. TYLER-TAYLOR.

(*Continued from page* 21.)

"Yes, yes, I see," said I, though for the life of me I did *not* see what on earth I was to do, as though I had *read* about swarms I had *never seen* one, neither was specially anxious to make the acquaintance of one. I knew, of course, from the "Guide Book" that swarming bees were quite harmless—also my friend, the doctor, had told me the same thing—but I somehow mistrusted them, and doubted their good intentions. Thus deliberating on the delicate question as to whether I should venture forth to do, or die, the matter was settled for me by the sudden and dramatic appearance of the gardener himself, with the information that the bees had forsaken the "trojanberries," and had now settled on the very top of an old apple tree, which stood in the far corner of the orchard. Having read somewhere that "A swarm of bees in May, is worth a load of hay," I thought it might pay me to do my best, even if the bees did their worst. Picking up, therefore, what grains of comfort I could, from the thought that swarming bees were not really on the war-path, but, on the contrary, in their most amiable mood (if bees can ever be said to be in such an enviable condition) I plucked up courage and hastily, but carefully, donned my suit of "armour," not forgetting, this time, to close up the chinks in the bottom of the trousers by means of a pair of cycle clips, and once again toddled—I mean *sallied*—forth to meet the foe. Feeling very heroic, I looked about me for signs of the usual admiring crowd, which, however, was conspicuous by its absence, no doubt considering discretion to be the better part of valour. Feeling very deeply the loss of that sympathy and admiration, which I considered my due, I nevertheless made my way bravely and alone to the far corner of the orchard.

No, not quite alone, for the brave gardener and his heroic son brought up the rear, carrying between them the biggest *bath* they had been able either to beg, borrow, or steal.

On my asking what on earth the bath was for, I was told it was to put the swarm into, as, there being such a *lot* of bees, they thought something *big* would be useful. This did not, to me, sound very cheerful, but, heaving a sigh of resignation, I nevertheless presented a brave outside front as we wended our way to the scene of action.

On arrival, however, I must confess to a sinking at the heart when I arrived at the old tree, for a horrible sight met my gaze.

A *lot* of bees, I should just think there were, *millions* of them by the look of it, all hanging from an horizontal branch right on the very top of the tree, just like an enormous football.

There did not seem to be very many bees flying about, and I was not very frightened of them, and only hit out at them some half-a-dozen times at most. Having deposited the bath exactly under the bees, we then procured the longest ladder available, and placed it gently, and, as we thought, securely, against the branch on which the bees hung. At my stern request, the gardener and his son held on to the bottom of the ladder, while I slowly and ponderously, began to climb.

Now, if you have never tried it, you have no idea how difficult it is to force your head through the branches and twigs of an ancient apple tree, more especially so when both head and sight are impeded by a veil.

I managed, however, to reach the top of the ladder without mishap, when I suddenly caught sight of the seething mass of bees in close proximity to my nose and, not at all liking the look of things, suddenly withdrew my head.

The consequences were disastrous, for a jagged hole was torn in my veil, and a few hundreds (more or less) of the little bounders at once passed through, and started to explore my face.

I, with difficulty, kept my balance, but to this day maintain that I kept my *head*, in spite of what my friends may say to the contrary. Yet, as luck would have it, one bee started to explore my left nostril, evidenly under the impression that it had found a nice, new, little hive all to itself.

This was too much of a good thing; I gave a violent sneeze, which resulted in two simultaneous happenings, for though I certainly sneezed away the bee, I also managed to sneeze the ladder from under me. Feeling myself falling, I frantically clutched hold of the nearest branch, and this, of *course*, proved to be the identical branch on which the bees hung.

Alas, my weight was too much for the rotten old tree, and after holding on for a few seconds, the branch gave way and I fell, we *all* fell.

Unfortunately however, the bees did not fall into the receptacle which had been so thoughtfully placed for them, *but I did*,

The bees, evidently not liking the look of the bath, took a violent fancy to the gardener's head, in fact they liked it so much that they fairly revelled in it.

I, personally, at that particular moment felt no interest either in the gardener's head, or anybody else's head, for I knew nothing about the matter until I had recovered consciousness.

However, I, a little later on, saw the gardener's head, and also heard it speak; it certainly "spoke for itself" in more ways than one.

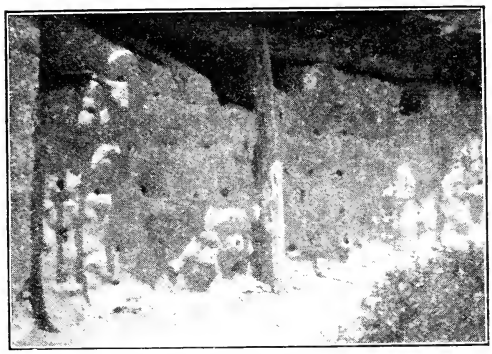
I have no bees now, my friend the doctor—nice man—said he would take them for "medical attendance provided"; well, I wish him joy of them.

Bees in Palestine and Cyprus.

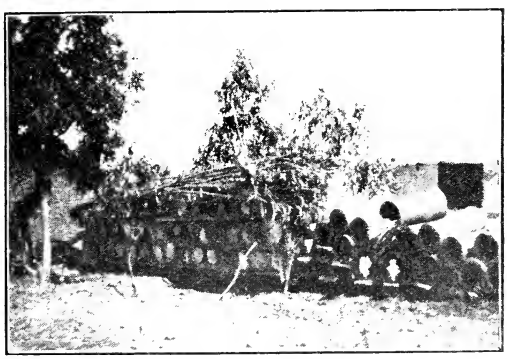
By Sergt. A. G. Carpenter.

(*Continued from page* 10.)

At this time—the end of 1918—I went over to Cyprus, where almost every village on the island had bees. I moved from place to place, N., S., E., and W. Everywhere I went were bees, but the bar frame hive is not in favour there, for I should think over 90 per cent. of the bees are kept in the old mud hives. Wherever I went through the various villages I took photographs of the hives I saw, but more than only in rare instances have I seen hives larger than what I call the standard. They are made of earth, mixed with a kind of chaff, and moulded out like a round chimney-pot, about 12 in. diam. at the back, tapering down to the front to about 9 in. diam., and are 2 ft. long. They pile them one above the other, with earth between, and they seem to last for two or three seasons. The front lid is made fast with mud, and has a tee-hole in the bottom of about 2 in. by ½ in.; the back, sometimes made of wood or slate, is wedged in and the spaces filled with mud. The bees are always put in



Mud Hives, Aganthon, Cyprus.



Hives Made of Pottery at Orondo, Cyprus.

often they were under- or over-exposed, and these I am sending you are some of the clearer ones I managed to get. Although in the case of the mud cylinder hives every bee-keeper makes his own, it is remarkable how they turn them out to a standard size; from the back, and usually build their combs at an angle of 45 deg. with the front lid.

I have assisted a good many of the Greek bee-keepers to take their honey, and had many a sting, for the combs are usually

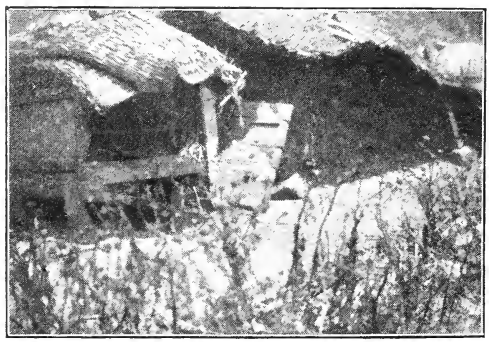
narrow, and when slicing out a long comb with one of their honey knives the one end gets broken off, and when it falls it crushes the bees underneath and upsets the whole colony.

Quite a lot of the churches have colonies of bees in the walls; every few feet of the wall has a stone removed, and in these spaces the bees build comb and establish themselves. I was told that the products are sold to support the priest, but the bees appear to be public property. I saw a very strong lot in the roof of a café also, between Larnaca and Limassol, but, from what I could gather from the owner, it meant pulling the house down to get their honey.

I was billeted in a village called Lefkonico, where an old priest kept a number of hives. One evening I was wandering around, and thought I would go and see them. When I got there I found his wife trying to get a swarm from the top of an almond tree, so I offered to assist her, and she gladly accepted my offer. She provided me with an old marrow which had been scraped out, and a veil made of stuff like a pile carpet, with a little square hole of gauze in front. I soon discarded the veil, although, for curiosity, I tried it on, and, with the marrow shell, I climbed the tree.

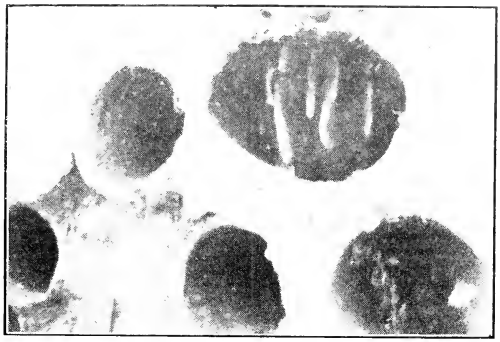
MUD HIVES, AND SERGT. CARPENTER.

After a while I got the swarm hived in the mud cylinder, and they settled down quite contented. Just then the old priest came along, and, with the aid of an interpreter, I got on chatting about the bees, so he invited me to come and see his bar frame hives the next day, which I did. I arrived at the appointed time, and we commenced to get ready. While I was getting the smoker ready his wife went away to the hives, no doubt with all good intent and purpose to help us, but she did the reverse. She took off four of the roofs and turned back the quilts, and when I got there with



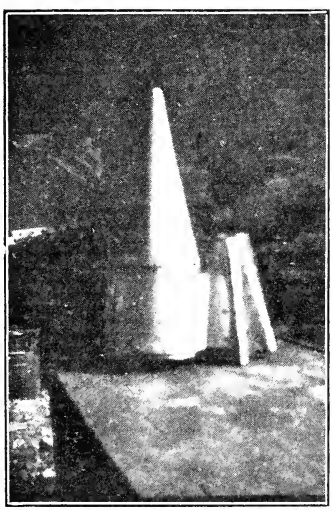
HIVES, AGANTHON, CYPRUS.

the smoker I got a warm reception, for the air was full of furious bees, and in endeavouring to replace the roofs and quilts the priest and myself were kept busy for a while after extracting the stings from each



INTERIOR OF MUD HIVES, AGANTHON, CYPRUS.

other, while his good lady stood afar off. Anyhow, I had a look at one hive, but the combs were glued so tightly with propolis that I feared to disturb them any more. I went to assist another bee-keeper at



SMOKER MADE BY SERGT. CARPENTER.

Oronda Village, whose hives were made of pottery; they were much like the mud hives, but were much cleaner and easier to cut out the combs. This old chap was badly in need of a smoker, so I made him one from a petrol tin, a piece of wood, and a bit of a leather tool bag, the bellows springs from an old hub greaser. When I had finished it I thought it so unusually smart for my turnout that I took a photo of it. Needless to say, my old bee friend was delighted with it.

Throughout the whole of my Eastern rambles amongst the bee-keepers the one thing I noticed most was the hearty welcome and good humour I was met with everywhere when they were told I was a bee-keeper from England. The same good cheer that exists amongst brother bee-keepers here in the homeland is the same wherever I have wandered. The bee industry, in my idea, is a haven of peace. May it live long, and still spread farther afield through the years to come.

[We were sorry to hear of the death, at the early age of 30 years, of Sergeant A. G. Carpenter, at Woodview, Wrecklesham, on November 6, following an operation after a fortnight's illness. Sergeant Carpenter was a member of the British Bee-keepers' Association, and, as will have been gathered from his article, which was sent to us some time ago, a keen bee-keeper. During the war he served as a Motor Transport driver in the A.S.C., and since demobilisation has followed the occupation of private chauffeur. He has been sidesman at St. Peter's Church, Wrecklesham, for 11 years, his name being retained on the roll during his 4½ years' Army service in Egypt, Palestine and Cyprus. He was also a member of the choir, and was held in the highest esteem by all who knew him. His notes and a number of photographs were sent shortly after his demobilisation, and in a letter accompanying them he said how pleased he was to get among his bees once more. He leaves a widowed mother, two brothers, a sister and his fiancée to mourn his death.—EDS.]

The Present Position of Diseases of Adult Bees.

An important address on the present position of diseases of adult bees will be given by Dr. John Rennie, F.R.S.E., President of the *Apis Club*, at the Central Hall, Westminster, London, on Saturday, February 25, at 2.30 p.m. The Conference Hall will be open at 2 p.m.

It is anticipated that many bee-keepers will avail themselves of the open invitation to attend this helpful address. There is no entrance fee.

Surrey Bee-Keepers' Association.

GUILDFORD DIVISION.

The members of the Guildford Division held a successful conversazione on Saturday last at Pitcher's Restaurant, Guildford.

Alderman Patrick, J.P., who presided, gave a brief account of the Association's activities, and announced that the Association had decided to give a free expert visit to members this year. The members then listened to an excellent and instructive lecture by Mr. J. Herrod-Hempsall (the well-known honey judge) on the preparation of honey for show purposes. The value of shows was emphasised as a means of bringing to the notice of the people the superior quality of English honey over the imported produce, which at times is cheaper, but is never up to the flavour and standard of the English article.

Surrey, with its heather commons, rolling downs, and beautiful flower and fruit gardens, possesses bountiful bee pasturage, and, therefore, makes the county one of the first in the kingdom for the culture of bees.

Last season some beginners were able to take 100 lbs. surplus honey from a single hive. The Association, although one of the largest, still desires to extend its member ship and activities, for it is always willing to advise and help those who are in any way interested.—E. G. W.

Suffolk BeeKeepers' Association.

ANNUAL MEETING.

The annual meeting of the Association was held at the Town Hall, Ipswich, on Tuesday, January 3. Mr. T. E. Mayhew presided. The balance-sheet, which was read by Mr. J. W. Freeman, showed that the Association finished the season 1921 with a balance in hand of £14 0s. 5½d. The balance-sheet was adopted. Sir John Ganzoni, M.P., was re-elected president, Mr. J. B. Chevallier as chairman, and Mr. T. E. Mayhew vice-chairman.

The resignation of Mr. J. W. Freeman was accepted with regret, and a vote of thanks was passed for the work he had done. Miss L. Bond was elected hon. secretary for the coming season

It was decided that the monthly meetings be again held at the offices of Mr. Mayhew, the first meeting to be held in March.

L. K. BOND, Hon. Sec.

Notices to Correspondents

Correspondents desiring an answer in the next issue should send questions to reach this office NOT LATER than the FIRST POST on MONDAY MORNING. Only SPECIALLY URGENT questions will be replied to by post if a STAMPED addressed envelope is enclosed. All questions must be accompanied by the sender's name and address, not necessarily for publication, but as a guarantee of good faith. There is no fee for answering questions.

R. T. H. M. (Canterbury).—*Registering design for honey label.*—Messrs. John P. O'Donnel & Co., Chartered Patent Agents, 14, Conduit Street, London, W.1. would give you particulars, and put the matter through for you on reasonable terms.

M. C. H. (Suffolk).—*2 lb. sections wanted.*—We do not know any dealer who now stocks these. So far as we know, it is not possible to get pure Caucasian queens in England.

V. H. (Bath).—*Feeding candy.*—No. 3 recipe is suitable for use now. If needed, candy should be given until about the end of March.

Cutting out queen cells.—This, as a rule, will not be necessary before May. Better give the bees room early enough to prevent overcrowding and consequent preparations for swarming.

The British and many County Bee-keepers' Associations have a library from which members may obtain the loan of books on paying postage both ways.

J. J. B. (Highate).—*Danger of overstocking.*—We do not think there is any danger of the establishment of another apiary endangering your surplus.

Queen rearing.—Anyone who goes in for rearing queens commercially must have a large number of nuclei in order to keep up the supply. We have not space to go into the matter fully. A book on queen rearing will give you more details.

Damaged frame.—Better scrap it.

J. H. (Leicester).—*Diagnosing "I.O.W." disease.* (1) A microscope is necessary in order to find out definitely if the disease is present; even then it is not always possible. The ordinary observer has to rely on the symptoms, of a large number of bees crawling, the dislocated wings, etc. (2) Yes. (3) The muscles are affected. (4) No. It is very seldom a stock that has lost 50 per cent. of its bees recovers. (5) A hive in which bees died 12 months ago may be used again, but should be disinfected. There is some risk in using the combs. If this is done they also should be disinfected. (6) One of the symptoms is that bees rub their bodies with the hind legs as though in pain. (7) We should not like to say any stock could be considered as cured without either a thorough microscopical examination of some of the bees, or they had showed no symptoms of disease for 12 months. It is quite possible if there were only five to twenty bees dead per day for a short time death might not be caused by "I.O.W." disease.

G. M. W. (Hants).—*Italian bees for sections.*—So far as we know there are no strains of Italians that will seal sections so well as natives. They usually give a "greasy" capping, as in your case, or it is thick and rough. (1) No better than any other. (2) Yes. (3) If you have hybrid Italians that are hard workers and cap sections well you had better stick to them.

Special Prepaid Advertisements.

One Penny per Word.

Will advertisers please read these Rules carefully in order to save trouble, as they will be strictly adhered to.

Trade *advertisements of Bees, Honey, Queens, and Bee goods are not permissible at above rate, but will be inserted at* **1½d.** *per word as* **"Business"** *Announcements, immediately under the Private Advertisements. Advertisements of Hive-manufacturers can only be inserted at a minimum charge of 3s. per ¼in., or 5s. per inch.*

PRIVATE ADVERTISEMENTS are only intended for readers having **Surplus Stock** *to dispose of.* **Driven Bees, Nuclei,** *and* **Queens that are reared or imported for sale,** *are Trade Advertisements, and can only be accepted under trade terms. A charge of 6d. extra will be made if a box number is used.*

Advertisements must reach us NOT LATER than FIRST POST on MONDAY MORNING for insertion in the "Journal" the same week.

Orders for three or more consecutive insertions in "The Bee Journal" entitle advertisers to one insertion in "The Bee-Keepers' Record" free of charge.

PRIVATE ADVERTISEMENTS.

1 CWT. Extracted Hampshire Honey for Sale. What offers? — GOODLAND, Chilbolton, Hants. a.64

TWO 28-lb. tins splendid quality Honey, £4, carriage paid.—C. KIDBY, Sizewell Road, Leiston. a.65

WANTED, small Extractor, good condition; also small Honey Ripener.—LING, Hagg Farm, North Walsham, Norfolk. a.68

FOR SALE, Extracted Honey, in 14-lb. tins, 1s. 3d. per lb.—ARTHUR ADCOCK, Meldreth, Cambs. a.69

CAN OFFER strong surplus Stocks of Bees (Hybrids) on 6 standard frames, wired combs, 1921 Queens, good working strain, mid April delivery, 55s., carriage paid.—WM. CHANNELL, Grove Apiary, Histon, Cambs. a.70

TWO HYBRID STOCKS for Sale (Burtt's Easy Manage and W.B.C.). Bees flying January 8 and 22. What offers?—5, Anderson Road, Erdington, Birmingham. a.72

FINEST quality well-filled Sections Honey, glazed, 2s. each, carefuly packed, on rail.—W. WOODLEY, Beedon, Newbury. a.46

CLOVER SECTIONS, £12 gross, £6 10s. ½ gross; Clover Honey, screw-cap bottles, £11 10s. gross, £6 ½ gross, 28-lb tins 1s. 6d. per lb.; tins free; f.o.r.—JOHN RUMBALL, Ayot St. Lawrence, Welwyn, Herts. a.51

WANTED, to rent or purchase, Cottage and Ground up to 4 acres, within 25 miles of London, preferably N.W. For Sale, six 6-frame Stocks with imported Italian or home-raised Queens, 54s. or 48s., delivery May and June.—BARRETT, Sunnyside, Cecil Park, Pinner. r.a.60

HEATHER HONEY.—Finest Scottish Heather Honey in bulk; packed in 28-lb. tins.—Samples and prices, WHYTE, Cumbernauld Station, Dumbartonshire a.22

WANTED, work in an apiary; live out; references exchanged; Devon preferred.—ALLCHIN, Trevone, Padstow. r.a.50

12 STOCKS ITALIAN BEES on 8 frames, 70s. each, delivery April; guaranteed healthy.—ENNEVER, 2, Oak Avenue, Enfield. a.52

PRICE £950.—10-acre Farm for Sale, June, 1922, as a going concern, suburbs of Sydney, N.S. Wales, Poultry (500 layers), Bees and Fruit; feed shed, brooding houses, incubators, netted fowl runs, good water system; House, 3 rooms and kitchen. Another 5-acre Farm, well stocked with poultry, pigs, fruit, etc., price £800. Terms arranged if required.—Particulars, apply MRS. ELLEN PHILLIPS, Ballingarra Road, Miranda, near Sydney, N.S.W. a.49

WILLOW HERB, excellent honey flower, plant now, 12 roots 2s. 6d.—BOWEN, Apiarist, Cheltenham. a.58

VERY finest quality Hampshire Honey for Sale; 5 cwt. in assorted size tins.—Box 50, BRITISH BEE JOURNAL, 23, Bedford Street, W.C.2. a.24

GOOD GLAZIER'S DIAMOND, perfect, 8s. 9d.; double 12-bore Breechloader, top lever, perfect, 98s. 6d.—HUBBARD, Northkilworth, Rugby. a.25

OFFERS invited for two new XL-All Hives, two deep, two shallow bodies each; also seven fitted Section Racks.—TUNNICLIFF, Barrow-on-Soar. a.23

COMPLETE MODERN APIARY FOR SALE, consisting of 40 strong Italian Stocks (1921 Queens), in nearly new 13-frame Hives, zinc-covered roofs, each hive fitted with excluder and two supers; 4-frame Extractor, Ripener, Feeders, etc.; carriage paid in Great Britain; April delivery; £300, or near offer.—Box 48, B.B.J. Office, 23, Bedford Street, Strand, W.C.2. w.11

BUSINESS ADVERTISEMENTS.
1½d. per word.

WILL those who desired in autumn to join the ex-Service Men's Coterie kindly send stamped, addressed envelope for particulars?—THOMAS, Burwell, Cambs. a.66

ASTOUNDING OFFER.

FINEST IMPORTED ITALIAN QUEENS BELOW PRE-WAR PRICES.—Heavy ITALIAN Swarms, April and May, from £2 5s. Delivery guaranteed. Stamp for particulars.—AMBROSIA APIARIES, S. Farnboro', Hants.

VACANCY for two Pupils desirous of learning bee-keeping. Their experience will be limited to my Cambs. and Suffolk Apiaries only.—THOMAS, Burwell, Cambs. a.67

DUTCH BEES, in skeps, £3 10s., carriage paid, March delivery.—COBB, 33, Bevan Road, Plumstead. a.73

THE ACARINE 1921 ECLIPSE PAD.—It knocks out mites and moths. By return post, 5s., post paid.—S. H. SMITH, 30, Maid's Causeway, Cambridge. a.74

PUPILS WANTED. — Opportunity to learn commercial bee-keeping, honey production, and queen-rearing, out apiaries; 150 colonies maintained.—Terms and particulars from CLARIDGE, Copford Apiary, near Colchester. r.a.47

FLAVINE—S BEE CANDY.—4 lbs., 5s.; 6 lbs., 7s.; 10 lbs., 11s.; 20 lbs., 21s.; all post and carriage paid; larger quantities at special rates.—S. H. SMITH, 30, Maid's Causeway, Cambridge. a.75

BUY YOUR BEES FROM BOWEN: Cotswold bred. Every Stock guaranteed. Circular free. a.56

SERVICE MEN!—Entrust your Queen orders to a Service Queen Breeder. Best possible value given.—LIEUT. BOWEN, Bee Specialist, Cheltenham. a.57

For bees' bees, queens and appliances come to PEARSON & GALE, Marlborough.

JACK TICKELL.—For Queens, Stocks and Nuclei. List free. — Westbourne Apiary, Cheltenham. r.a.54

INCOMPARABLE CREAM CANDY. — Great seller! Have you tried it? 7 lbs., 8s.; 10 lbs., 11s.—BOWEN. a.55

200 LBS. HONEY, 10 Stocks, from one Queen, Melton ex Simmins; proved honey producers. Queens, Stocks, Nuclei, Swarms. Book now.—MASON, Melton Apiary, Willerby, Hull. a.37

WE OFFER WITH OUR STOCKS AND NUCLEI an absolute guarantee against Acarine disease to Saturday, September 16, 1922.—Details from THE WELSH BEE GARDENS, Ashgrove, Brecon. (Proprietor, Lieut.-Colonel Weaver Price.) Really highest grade Italians. r.a.62

THE NEW FIRM.

P.C. from a quite unknown customer, dated 12.5.21.

"Hive arrived safely, and appears to me very satisfactory and practical."

[The first impression.]

Letter, with repeat order, from the same customer, dated 21.5.21, commences:—

"I am very pleased indeed with the 'Unitive,' which I consider the best hive I have yet seen. It only requires to become better known to become almost universally popular."

[The considered judgment.]

Literature, fully describing the *Improved* "Unitive" and other Specialities, about 32 pp., cap. 8vo., Illustrated, 4d., from

JAMES B. BALLANTYNE,
HAZELBANK, LANARK.
a.63

HONEY FOR BEE FEEDING.—Australian, two tins, about 60 lbs. each, 56s., one tin 28s., 7-lb. tins 4s. 9d. each; West Indian, two tins, about 60 lbs. each, 71s., one tin 40s., 7-lb. tins 5s. 9d. each. Carriage paid 100 miles on all orders 28 lbs. and over. Cash with order.—SOUTHWOOD, 95, Acton Vale, London, W. r.v.15

GUARANTEED absolutely pure Light Cambridge Honey, 13-lb. tins, 18s.; 28 lb., 39s.; carriage paid; sample 4d.—J. YOUNGER, 16, Maid's Causeway, Cambridge. a.42

NUCLEI.—Am now booking orders for my noted 4-frame Nuclei; Simmins', pure Italians, or Carniolans, 55s.; Hybrids, 45s.; carriage paid; 10s. deposit on returnable box. Book early and avoid disappointment. Delivery June-July.—HOWLETT, "Sylvabelle," Tring. r.a.31

CARNIOLANS.—Buy British-bred Queens, and have less trouble with supersedure. List.—SWAFFIELD, Libertus Villas, Cheltenham. r.a.3

QUEENS by return from April till October.—PEARSON & GALE, Marlborough. w.14

WONDERFUL CARNIOLANS AT PRE-WAR PRICES.—1922 Queens, bred from the only Carniolan stock selected for more than 20 years past with great care in ensuring the best possible honey results.—SIMMINS, Queenland, Heathfield, Sussex. r.a.12

HEATHER HONEY for Sale, in small or large quantities.—PEARSON & GALE, Marlborough. r.v.51

BUCKFAST QUEENS are the very best. Our 1922 Circular will shortly be ready.—(REV.) BROTHER ADAM, Buckfast Abbey, Buckfast, S. Devon. a.6

NEW HARDY YELLOW VARIETY.—No loafers hottest days. Gathered honey 1921 after all others had retired from business.—Particulars, S. SIMMINS, Queenland, Heathfield, Sussex. r.a.13

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QUALITY, NOT QUANTITY, OUR MOTTO! Never yet has our supply equalled the demand for our famous "Claridge Quality" Nuclei, notwithstanding continuous extensions to our apiary. The moral is obvious—Book your orders at once. Every Comb, every Bee in every "Claridge Quality" Nucleus is produced in our own Apiary, in our own Colonies! Your satisfaction is our reward.—CLARIDGE, "Italian Specialist," Copford Apiary, Colchester. r.w.66

BEES AND QUEENS.—Our 1922 Catalogue now ready. Don'ts miss it! Free on application. —PEARSON & GALE, Marlborough. w.17

ADMINSON'S SEMI-COMBS.—We can supply Nuclei on these Combs from mid-May onwards at cheapest rates.—PEARSON & GALE, Marlborough. r.v.51

HAVE YOU READ "THE BEE WORLD"? If not, why not? Every number in itself is a useful literary work for practice and reference. Specimen copy free.—Offices: THE APIS CLUB, Port Hill House, Benson, Oxon.

CAN YOU BEAT IT?—During 1921 we sold nearly seven hundred Stocks and two thousand Queens. Next year we hope to do still better.—PEARSON & GALE, Marlborough. v.29

FINEST ENGLISH HONEY, in 28-lb. cans, 1s. 6d. per lb.; cans and carriage free.—PEARSON & GALE, Marlborough. r.14

OUR 1922 CATALOGUES of Bees and Queens are now ready. Appliance Catalogues will be available mid-January. — PEARSON & GALE, Marlborough. w.13

BOOK NOW.—Choicest Carniolan Queens for 1922.—PEARSON & GALE, Marlborough. r.v.10

9D. PER 1 LB. CANDY.—4 lbs., 4s. 6d.; 10 lbs., 9s. 9d.; post free; larger orders 9d. f.o.r.—COBB, 33, Bevan Road, Plumstead. r.a.39

GORDON ROWE, 28a, Moy Road, Cardiff. SELLS all kinds and grades Honeys and pure Beeswax; samples 1s. each; terms, cash. Can supply Honey Parchments, stamped "Pure Honey," 2 lbs., 14s.; 1 lb., 9s. 6d.; ½ lb., 7s. per 100; 500 lots carriage paid.

THE
British Bee-Keepers' Association.

The recognised centre of practical and scientific bee-keeping in Great Britain. Particulars and conditions of membership may be obtained from the Secretary,

W. HERROD-HEMPSALL, 23, Bedford Street, Strand, London, W.C.2.

Orders booked now for April Stock- Catalogues now ready. PEARSON & GALE, Marlborough.

The "B.B.J." Ideal Candy-Making Thermometer.

This thermometer has been specially designed for making candy for bee food. In place of the usual scale progressing by two degrees, there are only two marks on the scale. The top mark shows the temperature to which the candy should be boiled. The bottom one when it is cool enough to commence stirring.

These are both engraved *on the glass* and are *accurate*. There are no calculations to be made as on the ordinary sugar boiler's

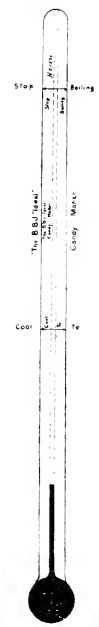

FIG. 1.

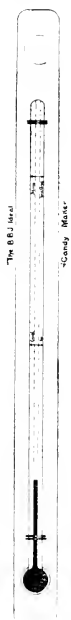

FIG. 2.

thermometer with a full scale of degrees, which are not always accurate. A recipe for candy and full directions are sent out with each instrument. They can only be obtained from this office. As they are being sold at cost price it is not possible to supply appliance dealers.

Fig. 1 shows the plain glass tube, price 4s.

Fig. 2.—Thermometer in brass case, 5s., both post free and packed in a neat cardboard case. We recommend the brass frames, as the tube being protected, it is not so likely to be broken. The frame is also plain, neat and easily cleaned.

"British Bee Journal" Office,
23, BEDFORD STREET, STRAND, LONDON, W.C.2

IN wishing all who may read this a Prosperous New Year, I have pleasure in announcing that I have taken my son into partnership.

We shall aim, as I have done in the past, to give good value, and hope that we may continue to add to our circle of customers.

Current Prices free on application.

E. J. Burtt & Son,

Manufacturers of Beekeepers' Supplies

Stroud Road, Gloucester.

(*Wholesale and Retail.*)

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BEES QUEENS
—THE— PINNACLE —OF— EXCELLENCE
APPLIANCES HIVES

The products of the Apiary, of Poultry and Farm Stock, of the Fruit and Vegetable Garden can be Advertised and Sold through

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Get a Copy—Thursday and Saturday, 3d. The "Bazaar" publishes also practical handbooks by experts. Send for full catalogue, post free from WINDSOR HOUSE, Breams Buildings, LONDON, E.C.2

BEE CANDY, 7-lbs. post free 7/6 10-lbs. 10/6
Reduction for further quantities.
S. J. BALDWIN, BROMLEY, KENT.

INSTRUCTION in BEEKEEPING
PRACTICAL AND THEORETICAL

My Apiary will be open for a limited number of pupils during this season. Terms and particulars from

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QUEEN BEE BREEDING ESTABLISHMENT,
(Many Awards)
E. TORTORA, OZZANO EMILIA (Bologna), ITALY.

LARGE QUEEN BEE BREEDING—GUARANTEED CHOICEST PRODUCTION.
Apply for Catalogue and Price List for the 1922 Season.

1922. ITALIAN QUEEN BEES. 1922.
May and June, each 12/-; four £2 0 0; one dozen, £5 0 0.
July and Aug., each 10/-; four £1 10 0; one dozen, £4 0 0.
Sept. and Oct., each 8/-; four £1 4 0; one dozen, £3 10 0.
S. H. SMITH, 30, MAIDS' CAUSEWAY, CAMBRIDGE.

OUR NOTED MEDICATED CANDY (MADE OF PURE WHITE CANE SUGAR)
2-lb. Glass Top Boxes, 2/2 each, post extra.
1-lb. " " " 1/1 " "
4-lb. 5/4 7-lb. 8/8 10-lb. 12/- post free.

2-lb. Plain Top Boxes, 2/- each, post extra.
1-lb. " " " 1/- " "
4-lb. 5/- 7-lb. 8/- 10-lb. 11/- post free.

Special Quotations for Quantities. Illustrated Catalogue Free. Established 1883.
C. T. OVERTON & SONS, CRAWLEY, Sussex.

SKIPWITH CANNELL,
The American Breeder of **American Beauty** Queens,
Aux Sièyes, par Digne, Basses Alpes, France.

Gentle as butterflies, bred for beauty, healthiness, hardiness and profit from America's most remarkable strains, the bees from my **American Beauties** are a pleasure to work with, a joy

	May	June	July.	
One **American Beauty**, Guaranteed superior.	**12/-**	**10/-**	**9/-**	to play with, and the most profitable bees for honey.

To those desiring **Italian** Italians I can offer fertile queens at very low prices:—

	May	June	July.	
An Italian queen, out of Italy's best.	**9/-**	**8/-**	**7/-**	not equal to my **American Beauties**, but good, honest, well-bred queens.

And remember! I *guarantee* delivery in perfect condition, within the week agreed, of more than your money's worth or a new queen! Order to-day—cheques, notes or British money orders by registered mail. Last year hundreds wrote too late—why wait?

SKIPWITH CANNELL,
The American Breeder of **American Beauty** Queens,
Aux Sieyes, par Digne, Basses Alpes, France.

"MEMPHIS L"—A CERTAIN CURE FOR I.O.W. DISEASE.
(Also Crawling, Bee Paralysis, and Dysentery.)

Have you ever seen your bees come out of the hive and one after the other fall over the edge of the alighting board to die? Have you ever seen those ghastly little brown patches? Now, open up the hive. Not a bee can rise to challenge you!

"MEMPHIS L" has been definitely tested and proved, and will permanently cure your poor little friends so gallantly trying to carry on for you. It is neither disinfectant nor drug, but a natural remedy, and no trouble to apply. We have such confidence in MEMPHIS that if stock is not COMPLETELY *cured to your own satisfaction we return cash in full. State how far disease has gone and any particulars of affected stock. If queen is over two years old we do not guarantee cure. This advt. will not appear again. Please make a note of it.*

Keep MEMPHIS on hand in case of emergency. Price, with full instructions, 3/9 per pot (sufficient for one stock) sent by return of post. Express parcel 1/- extra.

THE THAMES VALLEY BEES (REGD.), TEDDINGTON.

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The Bee-Keepers' Calendar.

FEBRUARY, 1922

2 Thursday. "Drawn by what peculiar spell,
By what charm of sight or smell,
Does the dim-eyed curious bee,
Labouring for her waxen cells,
Fondly settle upon Thee,
Prized above all buds and bells,
Opening daily at thy side,
By the season multiplied?"
Wordsworth, "To the Small Celandine"

3 Friday. "Give me a bower of willows,
Of moss and leaves unbought:
And fresh Amaryllis
With milk and honey fed."
T. Campion, "I care not for these Ladies."

4 Saturday. "And I, wi' pleasure,
Shall let the busy, grumbling hive
Bum owre their treasure."
Burns, "To William Simpson."

5 Sunday. "Out of the eater came forth meat, and out of the strong came forth sweetness."—*Judges* xiv. 14.

6 Monday. "And as hollow trees
Are the haunts of bees,
For ever coming and going;
So this crystal hive
Is all alive
With a swarming and buzzing and humming."—*Longfellow.*

7 Tuesday. "That which is not good for the swarm, neither is it good for the bee."—*Marcus Aurelius.*

8 Wednesday. "I fain would call thee hither, my sweeter love to learn,
Or in thy cedarn prison, thou waitest for the bee:
Ah! leave that simple homey, and take thy food from me."
William Cory, "An Invocation."

Shows and Showing.

An article referring to the above subject will be found on another page, and possibly a few notes from ourselves may be acceptable, more especially in respect to judging bee produce. In saying that "exhibitors should be prepared to take the decision of the judge without questioning," as reported on p. 575 of THE BRITISH BEE JOURNAL for December 8 last year, we do not think Mr. Price intended the remark to mean that no exhibitor should seek information from the judge, but that his decision should not be questioned; that is, disputed. There are very few judges who will not answer any question that may be asked by an exhibitor, so far as they can, and time will permit, if the questions are asked with a view to gaining knowledge and not to dispute the validity or fairness of the awards. An unsuccessful exhibitor may thus have pointed out any mistakes that may have been made, or any defects in the exhibit. One question, possibly the one generally asked, is, "What is wrong with my exhibit?" Nine times out of ten there is nothing actually *wrong* with an unsuccessful exhibit, only there were others that in the opinion of the judge were of better quality. We quite agree with our correspondent that exhibitors—or others—should not go round tasting, or otherwise testing, exhibits. A favourite trick is to turn jars of extracted honey upside down to test the density—a most objectionable practice, as if the caps have not been screwed down tightly the honey leaks, spoiling the appearance of both the exhibit and the stand. Very few judges who know their work now use this test, for it is far from reliable. To come anywhere near a true test there must be exactly the same amount of air in each jar. A jar might be so full of honey that all air was excluded, so that if it was turned up no bubble would rise, and, judging from that test, the honey would be almost solid, when, in fact, the density might be very poor.

We must defer further remarks until another issue; in the meantime, do not forget "Bee Shows to Come," and for these reserve some granulated honey. The honey garnered during the past year has been of splendid quality, and there should be some keen competition in the classes for granulated honey this year. One of the earliest shows—the earliest and largest of the large shows—is "The Royal," which this year is being held at Cambridge. The Cambridge Bee-keepers' Association is holding its annual show in connection with it. It is hoped all bee-keepers who can do so will give their support. Particulars may be obtained from Mr. E. C. R. Holloway, Burwell, Cambridge, Hon. Sec. of the Cambridge Bee-keepers' Association.

A Dorset Yarn.

VALUE OF HONEY AS A FOOD.

Last week I mentioned the New Zealand advertising exhibition in the Strand, the food value of honey being compared with fish, steak and eggs. I have had sent me a cutting (should think from a newspaper), but cannot say if the figures are correct, but it shows what a great deal of water there is in the ordinary foods that man buys to keep the body going. Honey is left in the cells uncapped that the moisture within it should evaporate, but foods of every-day consumption are mostly water.

Milk is more than three parts water. Beef meat has 75 parts water, but not the water as we consume it but in that it contains the constituents of water two parts of hydrogen to one of oxygen, bread 40 per cent. water, eggs 65 per cent. water, salmon 75 per cent. water. Cabbages are 87 per cent. water, potatoes 75 per cent. water, cucumbers as much as 95 per cent. water. Fruit is largely water and sugar, grapes are 70 per cent. water, and apples 80 per cent.

Honey as a food with so much of the water evaporated must necessarily be higher than these every-day articles of food containing so much. Honey is used as a food by those who suffer from rheumatism: they are confident that it is of great benefit to them. They are keeping bees so as to have a regular supply, and in seasons when they (living in urban areas) have not sufficient to carry on send to the Violet Farm for extra supplies. It has been said that the formic acid from stings is good for rheumatism, and I have also seen it stated otherwise; but what we eat (I have read somewhere) is used up for the different wants of the body, and some of it for the blood, so some of the constituents of honey are always in the system by those who regularly use honey as a food. One does not want to labour the subject unduly, but as a food honey is one of the best when it is compared with beef 75 per cent. water. It is very strange that potatoes should be as beef 75 per cent. water. This vegetable is used more than any other one; it is only about a penny or two each pound, and beef is over a 1s

Honey with so much of the water evaporated, even at the present prices asked for it, is a much cheaper food than fish,

beef or eggs. If honey is such a fine article for food there is still the surplus one can sell after one's own needs are supplied, which is considerable if in a good honey area, and a good season for harvesting it. With meat and fish one eats bread and some vegetable; honey is only used with starchy foods, with bread and butter, in cakes and biscuits, but nectar gathered from thousands of flowers must be a better article to consume as food than the flesh of animals, even though they may be healthy; but prosecutions prove that unscrupulous men will slaughter consumptive and diseased animals and dress them for sale. Some think that this country consumes too much animal food per head, and it is the cause of a C.3 rather than an A.1 people, but this is getting away from the subject. We bee-keepers know that honey is a good food, and are not tired of advocating its use.

One or two days this week have been particularly warm, bees have been very much in evidence, and are carrying pollen; there is every sign of them coming through strong, though after each cold night or two of frost they seem to have a lot of dead ones to carry out. We are fortunate in living only a few miles from the sea; we never get it so cold as it is further inland. I was struck with this on Wednesday morning (after a frosty night) going to Sherborne, which is about thirty miles away; after going fifteen miles there was a thin covering of snow. It was all gone before we returned, the wind going to south-west it brought out the bees the next and following days. One writer from Essex is concerned about these dead ones, and writes to know the reason. All guide books and calendars of operations give instructions to keep entrances clear of them. My correspondent need not "get the wind up" about a few old bees dying in winter; if the living bees are strong on the wing, and are active in clearing out the dead, one need not fear but what all is well. It is when they fly out on to the cold ground round the front of hives that one need be apprehensive, they seem to get chilled and never go back.

Flowers are moving fast, snowdrops are showing their white petals, but are not yet open for bees. After the New Year things seem to move on very fast, have only seen bees on laurestinus, Xmas rose and gorse; one lot seemed to have the robber's song on Thursday when Mr. Wells had come to see me. He told me of two stocks that had the robbing mania; he changed the stocks, reversed the strong and the weak, when the strong seemed to rob themselves and built up the weak lot and the strong lot went under, though I dare say other stocks had a turn as well. He anticipates great things with his goldens this season; he had one lot in a hollow tree stump that was pushed over by a donkey one night, but they were clustering all right when put in position next day. Stray goats and other animals are a nuisance to bees, even if one has barbed wire round them it will not keep out goats. They rub off the hive covers with their heads; it seems to be done at night, as if the owners loose them at that time purposely.—J. J. KETTLE.

[A printer's error crept into Mr. Kettle's yarn last week. In the second paragraph "One ounce of honey equals 10 eggs" should have been "Seven ounces of honey, etc." The printer mistook the figure 7 for a 1, and so spelt it out.—EDS.]

Jottings from Huntingdonshire

Everybody makes mistakes which are sometimes costly. This week I am going to relate a few mistakes I have made, with the hope that beginners may profit thereby. Unfortunately for human nature, it does not always follow that being forewarned is to be forearmed. Again and again have I advised people not to do certain things, and yet they have done them. I once warned my flock respecting a certain periodical, and not one of them was satisfied until they had seen for themselves. If, therefore, I caution beginners, I trust they will not blame me for exciting their curiosity. I think the first mistake I made with regard to bee-keeping was imagining swarming bees were of necessity furious. In my ignorance, I concluded that a swarm was starved out of its home, and looked upon swarming bees as I would a mob desperate for want of food. I was young then, but I have met people past middle age who held similar opinions. Another mistake of mine was manipulating without a veil. I had seen experts do it, and thought I should do likewise. I did, and suffered accordingly. Although I, nine times out of ten, attend to my bees with face uncovered, I make a point of never doing so when demonstrating, and I always advise people when commencing bee-keeping to wear a veil. Bee touch is acquired—more easily, perhaps, by some than others—but acquired nevertheless. By bee touch I mean that firm, yet gentle, handling of bees which seems to be immediately understood by them. Instinctively they know whether their manipulator is full of nerves or master of the situation. Again, some people can be smothered with stings and yet feel no inconvenience, others, while feeling little effect at the time, are tortured with an unceasing itching the next day, and there are not a few whose flesh swells almost immediately after the sting has been introduced.

One of my earliest mistakes was smothering a swarm. It was in the days of my youth. I had promised my brother to go and fetch a swarm from a village 4½ miles distant from our parental home. There was no difficulty; the swarm was skepped when I arrived at the village, and I had only to wait till sundown, when the owner of the swarm tied a piece of cheese-cloth over the mouth of the skep, and making a handy arrangement by which I could carry the skep on my bike. I with ease reached home and, it being then almost dark, placed the skep in an outhouse until the following

morning, but—mouth downwards. Alas! on the morning I was summoned by my respected brother to see the results of my folly. There was the skep, and running from it a trickle of water, and all within was death. By placing the skep mouth downwards I had smothered the bees. Someone will say, "Bees don't as a rule get smothered in skeps, which are always stood mouth downwards." True, but the cheese-cloth was over the entrance hole, and the poor bees could not use their ventilating powers. Had I have propped up one edge with a pebble all would have been well.

[We doubt if it would had the cheese-cloth been left on. The safest plan under those circumstances is to turn the skep *bottom upwards*, thus allowing the hot, vitiated air to escape upwards through the cloth.—EDS.]

Another mistake of earlier days was shaking swarms from a bough—if they happened to settle thus. By placing the skep under the cluster I used to shake the bough with great vigour, the result being the majority of the bees took to flight. All that is necessary is a sharp jerk to separate a swarm from a moving bough or branch. Still another mistake: On transferring my first stock from travelling box to hive I foolishly did the whole thing the wrong way about. Let me explain at length what I mean. Imagine the frames in the travelling box numbered 1 to 10. As one stood at the back of it, No. 1 was at the extreme left and No. 10 at the extreme right. I took out frame 1 first, which was right, but in placing in the hive I put it where frame 10 ought to be—on the right instead of the left of the hive. I discovered, before I had got half-way through the job, that I was making a pretty—or, shall I say ugly—mess of things. Frames with cells drawn out more on one side than the other refused to be fitted up so closely that the metal ends met, and when I had got the whole thing right the bees were furious, and told me, in their most definite language, that if I was going to fool them about they would make me repent of my folly. It was months before I appeased that stock. So go thou and do not likewise.—E F. HEMMING, Steeple Gidding.

Acari in Young Bees.

In a paper read before the Royal Society of Edinburgh, on November 1, 1920, it is stated on page 739: "Except in one doubtful case we have not found infection with *Tarsonemus* in brood of any stage, nor has it been found amongst the very youngest of adult bees."

A few days ago I received from near Bristol a few bees from a stock which had died out ten days' previously. With the bees was a piece of brood comb with cells mostly sealed over. The sealed cells contained bees which would, in the ordinary course of events in a healthy stock, have shortly hatched out. All the loose bees sent contained in the thoracic trachæ, the acari *Acarapis woodi* in all stages of growth. After very carefully cleansing all instruments in boiling-water and taking new, unused, slips and cover-glasses, I removed the top of one of the sealed cells, and, for safety, with another pair of forceps I lifted out the unhatched bee. I removed the contents of the thorax, which were in rather a decayed condition. I found on the slide an adult acarus, species *Acarapis woodi*, of a pale yellow colour. I then examined more cells and at first found nothing. Eventually I found one more acarus of the same species, under exactly the same circumstances.

Perhaps the following may be of interest. I wished to obtain some specimens of *Nosema apis* spores for mounting. Mr. Snelgrove very kindly sent me a couple of bees, which he was fairly certain would contain what I wanted. The bees died in 1919. So far, I have only examined one of the bees. I found Nosema spores in abundance. I thought it would be interesting to see if the bee contained acari also. I found one specimen of *Acarapis woodi*. I also found one specimen of *Tarsonemus Apis* (*Tarsonapis*), and on the outside of the bee I found one specimen of *Aleurobius farinæ*. Very possibly the latter only attached itself to the bee after death; but, in any case, that bee must have felt extremely unwell before it eventually expired.

—G. H. HEWTSON, M.A., F.R.M.S., Marr Vicarage, Doncaster.

North Cheshire Chat.

The weather for the last twelve days or so has been in these parts truly arctic. Have not seen a bee outside for about three weeks. One often wonders whether friend Kettle's bees are ever confined to the hives for more than two or three days at a stretch, as almost every week he mentions his bees flying. It shows the difference between the climate of North and South. As for bees bringing in pollen in January, well, mine will have to wait until nearly the end of February before there is the remotest chance of pollen being available. The last pollen my bees collected was from mignonette in the early days of November, the next source, if the weather is favourable, will be from hazel and early crocuses the end of next month. I take it Mr. Kettle grows his Christmas roses for sale primarily? It would hardly be a commercial proposition to plant them entirely for the use of the bees.

Mr. Harrison's contribution of a "Swarm of Bees Worth Hiving" (page 23), reminds me of my first attempt on a public platform. Somewhere back in the eighties of last century I learned as a recitation a similar "Swarm of Bees" (I do not think it was the same), to be given at a children's party. Though I knew it forward, backwards, and sideways, I had to be prompted pretty frequently. It was my first experience of stage fright, unfortunately not the last or the worst.

Mr. Tredcroft is very much against cones in hive roofs. Personally, I fail to see how they let in rain any more than perforated zinc over the same size aperture, in fact, a properly fitted cone could not in any circumstances let in rain. Wasps will sometimes find their way

through, but if double cones are used, with a space of 1 in. between them, they rarely do, at least, that is my experience. I have also found cone escape's useful for clearing supers during the honey flow; of course, this method is dangerous at any other time.

With regard to large hives, I have not had sufficient experience to speak authoritatively. The large (12 or more frames) I have had have given me no better results than the ordinary 10-frame standard; indeed, one of the best takes of honey I ever had was from a swarm on 9 standard frames worked for sections.

As this is my first contribution this year, I wish all readers the ideal weather my kinsman has outlined in last week's jottings, and a bumper honey harvest.—D. J. HEMMING. Appleton, Warrington, January 25, 1922.

Lichfield Lines.

Showing.—On page 575 of the "B.B.J.," our Staffs. county expert is reported as follows:—

"He said exhibitors should always be prepared to take the decision of the judge without questioning, or grumbling, not to be disheartened but 'try, try again,' learning the secrets of the successful exhibitor and the points in which they have failed."

I should like to know how one could adopt a more effective method of "learning the secrets, etc.," of the successful exhibitor than by questioning the judge, who makes it his business to discover "the points in which they have failed." My experience of judges has been that, the better the judge, the greater the satisfaction of the exhibitors; at the same time, I have never yet met one who refused to give a straight answer to a fair question. The keen exhibitor is always anxious to discover where he has lost points, but he should be the last person to go round tasting or otherwise setting bad examples to the public. Some really good ideas are given on page 168 of *The Bee World* in a letter to the Editor by Mr. J. Tinsley.

Wax.—Why do we so rarely see in our show schedules a class for commercial wax? The size and form of the wax in this class, as recommended in "Producing, Preparing, Exhibiting and Judging Bee Produce," by our former editor, is suitable for any requirements, whereas the ½ lb. or 1 lb. usually specified is unsaleable owing to its size, until broken up.

Bewildered Exhibitors.—In the classes for wax I have had some experience of the "try, try again" advice, and *now* I am never sure how matters are going to develop unless showing where I know something of the judge from past experience.

At one show where I had followed the advice given in the above *standard work* and shaped my exhibit as illustrated on page 86, "Wax properly moulded," the first prize was awarded to a "fancy shape," although the wax was no better than mine so far as I could judge. The following season I tried the "fancy shape," and failed again—disqualified. I had run against two judges who "followed *the* book." This has happened on other occasions also.

Sections.—Here we have another thorny question. On page 74 of the above work we find:—"Over-lacing should be avoided, as this rule is now strictly enforced at *all* shows," and this appeals to me as a sound rule, and one that is helpful to the judge in carrying out his duties; and here again we get "another little biff" by finding sections obviously overlaced well up in the prize-list.

Information Wanted.—Can you, Mr. Editor, or any reader of the JOURNAL inform me whether any other work is in existence, more up to date, and more informative than the one I have referred to on this subject, and if not, why should we not accept this work as a guide for both judge and exhibitor? What success I have had on the show bench has been in a great measure due to a study of its pages.

[The answer to this query is in the negative.—EDS.]

A Correction.—Under the heading "County Bee-keepers' Associations," I recently stated that the lending library of bee-books was provided by the Staffs. County Education Authority. This has been pointed out by our County B.K.A. secretary as incorrect, and I haste to make amends. The distribution only is undertaken by the Education Authority, the books being the property of the Staffs. Association by whom the postage is paid one way.—E. JACQUES.

Testimonial to Mr. T. W. Cowan.

The following subscriptions have been received:—

	£	s.	d.
Surrey B.K.A.	1	1	0
Apis Club	1	1	0
Pearman, J.	0	5	0
Hancox, D.	0	2	6
Smith, Mrs. A. ...	0	2	6
Grylls, Rev. G.	0	1	0
Babbage, R. R. ...	0	2	6
Wade, Mr.	0	2	6
Bale, Mr.	0	2	0
Mullen, C. W.	0	2	6
Middlesex B.K.A.	0	10	6
Aitken, J.	0	5	0
Rigby, A.	0	1	0
Stovell, S. S.	0	5	0
Housie, H.	0	2	0
Elliott, F. S.	0	1	0
Jones, T. A.	0	2	6
Westcott, Mr.	0	1	0
Reid, W. F.	1	1	0
Bryden, G.	0	10	6
Sillar, Miss M. D.	0	5	0
Chandler G.	0	0	6
Taylor, F. H.	0	10	6
Sussex B.K.A.	1	1	0
Snelgrove, L. E.	1	1	0
Aberdeen B.K.A.	3	3	0
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Loan, Dr.	0	5	0
Mabel Coates, Miss H. H.	0	1	0
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Wild Flowers as Bee Forage.

BY D. J. HEMMING.

Some months ago I promised a contribution on the above subject, but until now have not found the necessary opportunity. This article is not meant to be exhaustive, but the results, mainly, of personal observation, it is hoped they may be of some use to the intended beginner in bee-keeping in deciding whether he has a good district to start in. Generally speaking, the only source of *surplus* honey from entirely wild sources is that obtained from the heaths. Practically all the other surplus yielding wild flowers, such as charlock, etc., grow only on cultivated land. This notwithstanding, there are many sources of nectar from entirely wild origins, which are helpful as stop-gaps between main honey flows, and which provide early and late forage for brood rearing. In certain localities they may even yield surplus honey, as, for instance, where blackberry blossoms are very plentiful, and again in some districts in some years the hawthorn may help to swell the total of surplus of fruit blossom honey.

I have endeavoured as nearly as possible to set down the various flowers in their order of blooming, but many of them have overlapping periods, and sometimes the time of blossoming of different species, as it were, exchange places, some years one set appearing first, another year the other. For instance, in this district last summer the brambles blossomed simultaneously with the white clover, whereas they usually are much later. Differences in soil also affect the period of blooming, the same species coming to flower earlier on light soil than on heavy clay.

To start with, I put Gorse or Furze, as this may be found in blossom all the year round. I have never been located where my own bees could work on it, but I have seen bees very busy among the blossom, gathering apparently both honey and pollen. I saw bushes of this plant in bloom in Aberdeenshire on December 15, 1918.

Hazel.—Pollen gathered from the male flowers, or catkins. Usually available toward the end of February.

Common Daisy. — Pollen (occasionally). March, and onward.

Blackthorn or Sloe (*Prunus communis*) (*spinosa*).—Honey and pollen. March-April.

Dandelion.—Honey and pollen. Honey very dark colour, pollen dark red. March-April.

Coltsfoot.—Pollen. March-April.

Lesser Celandine (*Ranunculus ficaria*).—Pollen. March-April.

Field Speedwell (*Veronica agrestis*).—Honey. A lowly plant, called "Mayweed" in some parts of the country. Grows abundantly amongst young wheat. March-April.

Wych Elm (*Ulmus montana*).—Pollen and probably honey in some seasons. When it does yield honey the results to the trees are rather striking. They set millions of seeds, every branch and twig being so covered with seed vessels that there is no room for leaves, and the trees remain practically leafless until well on in summer, most of the seed being then aborted and leaves appearing. I only remember this happening in my neighbourhood on two occasions, about the years 1900 and 1909. On other years bees seemed not to bother with them much, although they always blossom freely. April.

Yew Tree.—Pollen. April-May.

Marsh Marigold (*Caltha Palustris*).—Pollen. April.

Wild Pear, Crab Apple, Wild Cherry, Bird Cherry, Red Cherry.—Honey and pollen. Where plentiful in fruit blossom districts would help surplus. April-May.

Goat Willow (*Salix Caprea*) (often called Palm).—Honey and abundance of pollen. April.

Common Willow (*Salix Alba*).—Honey, freely in some seasons. About the year 1899 I had a quantity stored in brood chambers. Bees preferred working willow blossom to plums. The honey was clear, somewhat thin: smell and taste left no doubt as to its source. April.

Abele or White Poplar (*Populus Alba*).—Staminate (male) flowers yield pollen abundantly, but bees do not work it freely. April.

Sycamore or Scotch Plane (*Acer pseudoplatanus*).—Always yields honey freely. Honey of poor quality, blossoms too early for storing in supers. April-May.

Bluebell or Wild Hyacinth (*Scilla Nutans*).—Bees sometimes work these for pollen, but the humble bees seem most fond of them

Hawthorn or "May."—Some seasons yields abundantly. Honey somewhat dark, fairly thick, with the scent of "May." Forward stocks may store some in supers. May-June.

Sainfoin and Lucerne.—Sometimes found wild by roadsides in districts where they have been cultivated. Although yielding fine honey, are not common enough to make any appreciable difference to honey yield. But the bee-keeper is happy who is located where sainfoin is cultivated.

Broom (*Sarothamnus* (*Sytisus*) *scoparius*).—Yields honey, but humble bees work it mostly. May.

Charlock (*Sinapis arvensis*) and Wild Turnip (*Brassica rapa*).—These are often confused under the general name of "Yellow flower weed." In this district the cornfields are golden with the blossom of the wild turnip, a few isolated plants only of charlock (wild mustard) occurring. In the south charlock is the "yellow weed." As honey producers they may be classed about equal. The honey is amber in colour, very good flavour, granulates very quickly, often in the comb, the granules being coarse and sugary. Large quantities are stored in supers, either pure or mixed with other honey, usually white clover. May and early June.

Wild White Clover.—Grows freely on roadsides and in old pastures. Honey of finest quality. Not to be depended on for surplus unless there is plenty of the culti-

vated variety in adjacent fields. End of May till August.

Hop Trefoil (*Tritolium procumbens*).—On some land this grows as a weed amongst the corn very profusely. Yields very good honey.

The Vetches, of which there are nearly a dozen species growing freely in various parts of the country, all yield their quota towards the grand total of honey collected by our bees. All summer.

The Speedwells (*Veronica*) of numerous species, some of which are visited by bees All summer.

Privet.—Where this blooms, which it does if allowed to grow in hedgerows untrimmed, bees are sure to work. The honey, I believe, if of a rank flavour. June-July.

Wild Raspberry and Common Bramble (Blackberry).—Where these grow freely they make an appreciable difference to the surplus. Honey rather dark, but very good flavour.

Lime Trees.—These yield abundantly some years, usually in July, after the main flow from clover. Honey has a characteristic musty flavour and aroma.

Rest Harrow (*Ononis arvensis* and *spinosa*).—These yield honey usually towards the end of their blossoming time (middle to end of July). To some tastes this honey is not nice. When living in Oxfordshire I invariably used to get some at the end of the season. It smelled very strongly, tasted equally so. It was some time before I could discover the source. The odour is exactly like the odour of the leaves of the plant when rubbed between thumb and finger. It granulates imperfectly with coarse granules.

Wild Thyme.—I have seen bees working this freely. June-August.

Willow Herbs, of species.—The one I observed most bees on last summer was the "Great Hairy Willow herb (*Epilobium hirsutum*), which grows freely hereabouts. Another species (*Epilobium tetragonum*), the square-stalked willow herb, grows in this district fairly freely too. July.

Hawkweeds and Hawkbits are visited by bees late in the season, and help to build up winter stores.

The Heaths.—Everybody knows that honey is got from heather. The only truly wild source of surplus. July-September.

Ivy.—Last of all honey-yielding plants (except the perennial gorse, of which it is said, "When gorse goes out of blossom kissing goes out of fashion"). Ivy is valuable as a help to winter stores. This year the ivy blossom was cut short by November frosts

British Bee-Keepers' Association.

The secretary will be abroad for 10 days and unable to deal with correspondence during that time.

Preparing for Heather.

I have been thinking over the article by "Robin Hood," page 599, "B.B.J.," December 22, 1921 on above subject, and without wishing in any way to criticise what is there stated. I wish to set down what has been my own experience over a long number of years of heather going. I wish first to endorse what your correspondent says regarding the desirability of having a very large adult population of bees at the time of going to the moors. This is undoubtedly the crux of the whole matter to begin with, but more is needed than this if we are to be successful to the full. A queen that can keep a good part of the brood nest full of eggs is also necessary, if one is to be spared the penalty of spring dwindling for our heather harvest. A very simple method suitable to a small apiary has been practised by us for many years. A 3-frame nucleus is placed beside the hive destined for the heather, the sufficient number of nuclei are made up early in the season, or when early swarms issue. The combs of brood and queen cells are utilised for this purpose, while the swarms are returned to the old stand, thus almost without loss of honey things are allowed to mature to the opening days of August, when heather begins to bloom. It is then usually found that the nucleus contains a fine young queen which has been laying for some time. A day or two before the trip is undertaken the old queen, which has done duty so well all season is dethroned, and the nucleus joined on, both lots being dusted thoroughly with flour from a dredger (and we have never yet seen this method a failure), thus giving an addition of bees and brood, and also a young, vigorous queen who will materially aid the storing of honey in the supers. The stock will also come back in fine condition from the moors, and will invariably winter right and come out one of the very best the next spring.

One other very necessary thing in heather going is built out combs. In our opinion the ideal stock for the heather is one containing from 8 to 10 standard frames of brood, mostly sealed, headed with a vigorous young queen of the present season, and any amount of adult bees ready to gather nectar. Over all put two supers full of built out combs, ready to be filled with the precious golden nectar. One may have all these things and occasionally not get much honey, but one will at least have done all that one can do, and will deserve to get it. With every good wish.—"AYRSHIRE."

Questions, &c., for Bee-Keepers for Self-Examination.

617. What are the disadvantages in commencing bee keeping with driven bees?

618. Compare English bees with foreign from the point of view of profitable bee-keeping.

619. State the similarities and the differences in the metamorphoses of bees of each kind in a colony.

620. Of what material or materials are the cappings of the various cells made?

621. Describe fully the organs of wax secretion and production in bees.

622. Estimate the importance of wide reading as an aid to successful bee-keeping.

623. In obtaining a stock of bees in a hive to commence bee-keeping, what points should be attended to?

624. What are the characteristics of good heather honey?

J. L. B.

A Record Yield from One Hive?

[10626] Having seen in our Journal several good reports of honey taken last year, I thought it may interest some of your readers to have a report of my best stock, which I think is one of the best on record in this country, 383 lbs., taken as follows :—

May 25.	Extracted	38	lbs.
June 21.	,,	40	,,
July 2	,,	40	,,
,, 4.	,,	36½	,,
,, 11.	,,	12	,,
,, 12.	,,	44	,,
,, 13	,,	27½	,,
,, 27.	,,	99	,,
Aug. 26.	Sections	10	,,
,, 30.	Pressed Heather	19	,,
Sept. 16.	,, ,,	17	,,
		383	lbs.

The stock is a first cross Italian, with plenty of heather stores left for wintering. The reason for extracting so often was that I had not enough ready combs to put on, taking out only a few sometimes to give room to go on; all honey taken was of first-class quality.

My second best also was a hybrid, from which, with its swarm and cast, I have taken 319 lbs., viz. :—

	Old stock	139	lbs.
May 24.	Swarm	156	,,
June 4.	Cast	24	,,
		319	lbs.

Total from the two, 702 lbs., with an increase of two in stock, all left with plenty of stores for winter. I may say that I have kept bees in frame hives for over 40 years, but never had any to compare with these; also I had my first Italian queen in May, 1882, from Mr. Samuel Simmins.

One of your readers was inquiring in the Journal lately for 2-lb. sections; if not supplied, I have about 1,000.—Jno. Berry, Llanwrst, N. Wales.

[We believe the record weight of honey has been held since 1897 by Mr. Lancelot Quale, in the Isle of Man, with 334 lbs. We believe Mr. Berry's take is a record. Can anyone beat it?—Eds.]

Colour in Bees.

[10627] The other evening an acquaintance called on me, and talking of bees raised a point which seems to me rather important. He has, to my knowledge, several good stocks, docile, disease resistant, and hard workers; but, and here is the point, dark coloured. He wants to requeen to obtain "goldens," and no amount of argument will convince him that he would be wiser to keep on as he is.

Now, this question of colour is constantly cropping up, and to my certain knowledge many good strains have been scrapped on this point alone.

Why will bee-keepers' blind themselves to facts? Colour is immaterial if the other factors are present. Personally, I would rather have a good strain of stingy bees than a poor strain of the brightest goldens ever put on the market.—G. Jas. Flashman.

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DISEASED QUEENS or healthy Drone Breeders. Virgins sorely needed, with few or many Bees, for Disease Research. Expenses most willingly repaid.—J. W. MOIR, 64, Polwarth Terrace, Edinburgh. b.6

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WILL exchange for bees, hives, or honey, seven Black Leghorn Pullets, guaranteed day-olds Bostock-Smith, April, 1921.—Offers to CLAY, Kingsleigh, Wellington, Salop. b.9

BLACK CURRANT BUSHES, two years, 6s. dozen, 3s. 9d. half, carriage paid; Wells' Hive, takes 16 standard frames, two dummies, new, never used, painted, 40s.; three new Hives, take 12 frames, painted, 30s. each.—SMITH, 72, Norton Street, Birmingham. b.5

CHANNEL ISLANDS.—Small Model Apiary for Sale, capable of extensive enlargement; no disease; no rival apiarists; good local honey sale; opening for poultry farming in conjunction.—Box 51, B.B.J. Office, 23, Bedford Street, Strand, W.C.2. b.11

WANTED, to rent or purchase, Cottage and Ground up to 4 acres, within 25 miles of London, preferably N.W. For Sale, six 6-frame Stocks with imported Italian or home-raised Queens, 54s. or 48s., delivery May and June.—BARRETT, Sunnyside, Cecil Park, Pinner. r.a.60

WANTED, work in an apiary; live out; references exchanged; Devon preferred.—ALLCHIN, Trevone, Padstow. r.a.50

12 STOCKS ITALIAN BEES on 8 frames, 70s. each, delivery April; guaranteed healthy.—ENNEVER, 2, Oak Avenue, Enfield. a.52

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BENHALL BEES.—A limited number of really good 5-frame Nuclei, headed by purely-mated 1922 Italian Queens, during May £2 10s. Cash with order.—RIVIS & GRAY, Benhall, Saxmundham. b.16

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FOR SALE, six Simmins' Double Conqueror Hives, with section racks and supers, in very good condition, £5 each.—E. R. & A. DEBENHAM, Bladen Dairy Farms, Briantspuddle, Dorchester. r.b.13

CAN OFFER strong surplus Stocks of Bees (Hybrids) on 6 standard frames, wired combs, 1921 Queens, good working strain, mid April delivery, 55s., carriage paid.—WM. CHANNELL, Grove Apiary, Histon, Cambs. a.70

GOOD GLAZIER'S DIAMOND, perfect, 8s. 9d.; double 12-bore Breechloader, top lever, perfect, 98s. 6d.—HUBBARD, Northkilworth, Rugby. a.25

HONEY.—2 dozen 1-lb., screw top, 24s. dozen.—H. DOBELL, Marden, Kent. b.20

OFFERS invited for two new XL-All Hives, two deep, two shallow bodies each; also seven fitted Section Racks.—TUNNICLIFF, Barrow-on-Soar. a.23

COMPLETE MODERN APIARY FOR SALE, consisting of 40 strong Italian Stocks (1921 Queens), in nearly new 13-frame Hives, zinc-covered roofs, each hive fitted with excluder and two supers; 4-frame Extractor, Ripener, Feeders, etc.; carriage paid in Great Britain; April delivery; £300, or near offer.—Box 48, B.B.J. Office, 23, Bedford Street, Strand, W.C.2. w.11

BEES FROM HOLLAND.—The best Dutch stocks offered in original skeps (in crates of six skeps). Moderate prices. Delivery March. Price List on application. Send postcard to-day.—HENK v. LANGEVELD, Gasthuisringel 42 rood, Haarlem. b.12

STRONG, healthy Italian Bee Stocks for Sale, headed by imported or home-bred Queens; delivery April, May, 1922.—DAVIDSON, Forest Road, Burton-on-Trent. b.14

IMPORTED QUEENS, Italian, Dutch or Carnolian; May, 9s.; June, 8s.—DAVIDSON, Forest Road, Burton-on-Trent. b.15

STRONG, healthy Stocks Dutch Bees in skeps for Sale, delivery March, April, May, 1922.—DAVIDSON, Forest Road, Burton-on-Trent. b.16

I HAVE a few hundred new Standard Brood Frames, 19s. 6d. 100; Wide Shallow Frames, 20s. 100; carriage paid; cash with order. Don't delay.—TUNMER, The Apiary, Maldon, Essex. r.b.19

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MAY SWARMS, £1 12s. 6d., packing, carriage free; 4-frame Nuclei (May), 42s., carriage paid; boxes 8s. extra, returnable.—H. WELCH, Wickham, Hants. r.b.22

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WILL those who desired in autumn to join the ex-Service Men's Coterie kindly send stamped, addressed envelope for particulars?—THOMAS, Burwell, Cambs. a.66

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FINEST IMPORTED ITALIAN QUEENS BELOW PRE-WAR PRICES.—Heavy ITALIAN Swarms, April and May, from £2 5s. Delivery guaranteed. Stamp for particulars.—AMBROSIA APIARIES, S. Farnboro', Hants. r.a.71

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JACK TICKELL.—For Queens, Stocks and Nuclei. List free. — Westbourne Apiary, Cheltenham. r.a.54

200 LBS. HONEY, 10 Stocks, from one Queen, Melton ex Simmins; proved honey producers. Queens, Stocks, Nuclei, Swarms. Book now.—MASON, Melton Apiary, Willerby, Hull. a.37

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GUARANTEED absolutely pure Light Cambridge Honey, 13-lb. tins, 18s.; 28 lb., 39s.; carriage paid; sample 4d.—J. YOUNGER, 16, Maid's Causeway, Cambridge. a.42

NUCLEI.—Am now booking orders for my noted 4-frame Nuclei; Simmins', pure Italians, or Carniolans, 55s.; Hybrids, 45s.; carriage paid; 10s. deposit on returnable box. Book early and avoid disappointment. Delivery June-July.—HOWLETT, "Sylvabelle," Tring. r.a.31

CARNIOLANS.—Buy British-bred Queens, and have less trouble with supersedure. List.—SWAFFIELD, Libertus Villas, Cheltenham. r.a.3

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BITNJE, P.O BOHINJSKA BISTRICA, UPPER CARNIOLA, S.H.S. EUROPE

GORDON ROWE, 28a, Moy Road, Cardiff. SELLS all kinds and grades Honeys and pure Beeswax; samples 1s. each; terms, cash. Can supply Honey Parchments, stamped "Pure Honey." 2 lbs., 14s.; 1 lb., 9s. 6d.; ½ lb., 7s. per 100; 500 lots carriage paid.

THE

British Bee-Keepers' Association.

The recognised centre of practical and scientific bee-keeping in Great Britain. Particulars and conditions of membership may be obtained from the Secretary,

W. HERROD-HEMPSALL, 23, Bedford Street, Strand, London, W.C.2.

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	£	s.	d.
Full page	4	10	0
Half page	2	16	0
One-third page	2	0	0
Quarter page	1	15	0
1½ in. across page	1	10	0
1 in. across page...	1	0	0
½ in. across page...	0	12	0
1½ in. single column	0	17	0
1 in. single column	0	12	0
½ in. single column	0	7	0

Discount for a series of consecutive displayed advertisements:—Six insertions, 2½ per cent.; Twelve insertions, 5 per cent.; Twenty-six, 15 per cent.; Fifty-two, 30 per cent.

INCOMPARABLE COTSWOLD CANDY

"BEES JUST LOVE IT." 7 lbs. 8/-; 10 lbs. 11/-. Special Terms for 28 lbs. upwards.

LIEUT. A. H. BOWEN, Queen Specialist, CHELTENHAM.

WRITE FOR BOOKLET.

Orders booked now for April Stock. Catalogues now ready. PEARSON & GALE, Marlborough.

The "B.B.J." Ideal Candy-Making Thermometer.

This thermometer has been specially designed for making candy for bee food. In place of the usual scale progressing by two degrees, there are only two marks on the scale. The top mark shows the temperature to which the candy should be boiled. The bottom one when it is cool enough to commence stirring.

These are both engraved *on the glass* and are *accurate*. There are no calculations to be made as on the ordinary sugar boiler's

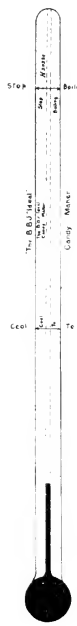


FIG. 1.

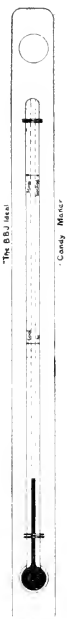


FIG. 2.

thermometer with a full scale of degrees, which are not always accurate. A recipe for candy and full directions are sent out with each instrument. They can only be obtained from this office. As they are being sold at cost price it is not possible to supply appliance dealers.

Fig. 1 shows the plain glass tube, price 4s

Fig. 2.—Thermometer in brass case, 5s., both post free and packed in a neat cardboard case. We recommend the brass frames, as the tube being protected, it is not so likely to be broken. The frame is also plain, neat and easily cleaned.

"British Bee Journal" Office,
23, BEDFORD STREET, STRAND, LONDON, W.C.2

SEASONABLE BUYING.

NOW is the best time to be getting ready to meet the needs of the coming season :—Unexpected swarms, or sudden bursts of honey gathering.

Shallow Frame Supers in the flat, 2/5. Frames 3/3 per doz. Foundation 3/3 per lb.

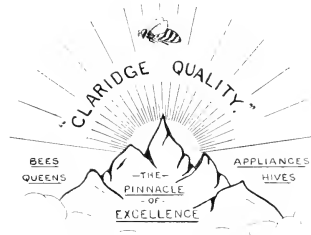
Full Illustrated Catalogue free on application.

BURTT & SON,

Manufacturers of Beekeepers' Supplies

Stroud Road, Gloucester.

(*Wholesale and Retail.*)



F. N. CLARIDGE, Copford Apiary, Colchester.

The products of the Apiary, of Poultry and Farm Stock, of the Fruit and Vegetable Garden can be Advertised and Sold through

THE

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Get a Copy—Thursday and Saturday, 3d. The "Bazaar" publishes also practical handbooks by experts. Send for full catalogue, post free from **WINDSOR HOUSE, Breams Buildings, LONDON, E.C.2**

BEE CANDY, 7-lbs. post free 7/6 10-lbs. 10/6
Reduction for further quantities.
S. J. BALDWIN, BROMLEY, KENT.

INSTRUCTION in BEEKEEPING
PRACTICAL AND THEORETICAL
My Apiary will be open for a limited number of pupils during this season. Terms and particulars from
W. HERROD-HEMPSALL,
The W.B.C. Apiary, Old Bedford Road, Luton, Bedfordshire.

QUEEN BEE BREEDING ESTABLISHMENT,
(Many Awards)
E. TORTORA, OZZANO EMILIA (Bologna), ITALY.
LARGE QUEEN BEE BREEDING—GUARANTEED CHOICEST PRODUCTION.
Apply for Catalogue and Price List for the 1922 Season.

1922. **ITALIAN QUEEN BEES.** 1922.
May and June, each 12/-; four £2 0 0; one dozen, £5 0 0.
July and Aug., each 10/-; four £1 10 0; one dozen, £4 0 0.
Sept. and Oct., each 8/-; four £1 4 0; one dozen, £3 10 0.
S. H. SMITH, 30, MAIDS' CAUSEWAY, CAMBRIDGE.

OUR NOTED MEDICATED CANDY (MADE OF PURE WHITE CANE SUGAR)
2-lb. Glass Top Boxes, 2/2 each, post extra. | 2-lb. Plain Top Boxes, 2/- each, post extra.
1-lb. " " " 1/1 " " | 1-lb. " " " 1/- " "
4-lb. 5/4 7-lb. 8/8 10-lb. 12/- post free. | 4-lb. 5/- 7-lb. 8/- 10-lb. 11/- post free.
Special Quotations for Quantities. Illustrated Catalogue Free. Established 1883.
C. T. OVERTON & SONS, CRAWLEY, Sussex.

SKIPWITH CANNELL,
The American Breeder of **American Beauty** Queens,
Aux Sieyes, par Digne, Basses Alpes, France.

Gentle as butterflies, bred for beauty, healthiness, hardiness and profit from America's most remarkable strains, the bees from my **American Beauties** are a pleasure to wor with, a joy

One **American Beauty**, Guaranteed superior.	May	June	July.	to play with, and the most profitable bees for honey.
	12/-	**10/-**	**9/-**	

To those desiring **Italian** Italians I can offer fertile queens at very low prices:—

An Italian queen, out of Italy's best.	May	June	July.	not equal to my **American Beauties**, but good, honest, well-bred queens.
	9/-	**8/-**	**7/-**	

And remember! I *guarantee* delivery in perfect condition, within the week agreed, of more than your money's worth or a new queen! Order to-day—cheques, notes or British money orders by registered mail. Last year hundreds wrote too late—why wait?

SKIPWITH CANNELL,
The American Breeder of **American Beauty** Queens,
Aux Sieyes, par Digne, Basses Alpes, France.

QUEENS AND SWARMS, 1922.
Forwarded as from March 1st. Safe arrival guaranteed.

Replace your Old Queens by Young March-April Queens.

Tariff free on application—
LAPONCHE, DRAGUIGNAN, FRANCE.

The Bee-Keepers' Calendar.

FEBRUARY, 1922

9 Thursday. "Come then and homeward; passing down the close path of the meadows,
Home like the bees stored with sweetness."
Meredith, "Pastorals."

10 Friday. "I who am little among trees
In honey-making mate the bees."
William Morris, "The Fig Tree."

11 Saturday. "And as you sit there at your ease, O Marquise!
And the men flock round your knees
Thick as bees,
Mute at every word you utter,
Servants to your least frill-flutter,
Belle Marquise!"
Austin Dobson, "Une Marquise."

12 Sunday. "What is sweeter than honey? and what is stronger than a lion?"—*Judges* xiv. 18.

13 Monday. "His helmet now shall make a hive for bees."
George Peele (1558), "*Farewell to Arms.*"

14 Tuesday. "As drooping fern for dewdrops,
For flowers the bee,
Wave-weary birds for woodlands,
Long I for thee."—*John Todhunter, "A Love Song."*

15 Wednesday. "Before the bust you flaunt and flit
Of 'blind Meonides'—
Ah, trifler on his lips there lit
Not butterflies, but bees!"
A. Dobson, "To an Intrusive Butterfly."

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Shows and Showing.

We quite agree with Mr. Jacques (page 45) *re* classes for wax. It would be much better to have only classes for wax put up in form suitable for retail trade, and in classes for wax only fancy shapes should be barred. In any case the shape of the mould in one pound, or half-pound, cakes should not influence the judge.

With regard to sections, our opinion is that whenever the amount of clear glass

to be shown is specified in the rules, it should be rigidly adhered to. Some judges are very lax on this point, but we think it is a great mistake. We know that in many instances this laxness has caused great dissatisfaction among those exhibitors who are careful to observe the rules. It is a direct encouragement to carelessness and slackness in preparing sections for the show bench. If exhibitors who infringed the rule were penalised, and the reason given, they would quickly mend their ways and over-lacing become a rarity. If both exhibitors and judges persist in ignoring the rules these become of non-effect, and we shall be back to the old custom, when sometimes only about a square inch of clear glass was left through which the capping of the section could be seen. Those who are on show committees where classes for honey, wax and other bee produce are under consideration should see to it that the rules regulating the height of jars for extracted honey and the lacing of sections are inserted.

We quite agree that exhibitors should take the judge's decision against their exhibit in a sporting spirit, even when they think, as they often do, that the prizes have gone to produce inferior to their own, but we advise any one during the coming season to lodge a protest with the committee if a judge does not observe the rules laid down (for judges as well as exhibitors need keeping up to their work), and we advise judges to carefully read the rules laid down for exhibitors at any show they may be officiating at, and to adhere to them, even if it involves disqualifying exhibits that would otherwise be among the prize-winners. By so doing they will enhance their own reputation for fair dealing and help to place showing on a higher plane.

A Dorset Yarn.

"It is not the length of life that counts, but what we do in that life."

In the early days of the war I had a letter from one of the "Old Contemptibles" who, as a reservist, rejoined his regiment at the outbreak of war, leaving his wife to attend to his bees. Reading the lines after seven years have passed, one sees that his heart was in the homeland, there is in the lines a prayer for his loved ones. He was soon sent back debarred from further service by wounds. He wrote to me after for black currant cuttings, when he was trying to wring from the soil a "living wage." He has since written they did him a good turn, now he has a reward for his labours, but like all of those who have their heart in production, he is expanding: he has realised "that there is no such thing as standing still, so soon as you cease progression, retrogression begins." Those who motor along the Ringwood road from Wimborne will see the home of just such another returned soldier, who left bees and wife, land and glass, all for the lure of the Army in his old regiment. He also came back to the land of his fathers; his wife had "carried on," the frames were full of violets, the soil was well cropped. But now there are built on the holding other glass houses, the bees are increasing. The man who wrote the text at the head of this paper died of wounds early in the war. He was a grandson of the famous Gladstone, and the passage was in the last letter home to his mother, but his words are inspiring. These two returned soldiers are an illustration of his words, "It's what one does in life that counts." The high wages during the war have taken away the initiative from many men to start on for themselves, the small return for the first year or two puts a damper on their ardour, but "Everything comes to him who waits"—that is, if he *works* and waits. In our immediate neighbourhood the growers of fruit and vegetable produce are extending their acreage. Some are buying field after field as it comes in the market: there is nothing gives such quick returns as market vegetables; nothing employs more labour than these fields that are used for intensive culture. It is these men that are making the country happier, in that they give employment to others. As one yarns of bees all these growers are stocking bees. At the last Council meeting of the B.B.K.A. our esteemed secretary stated that bees (in number of stocks) were up to pre-war level: the dealers in bees have distributed a tremendous lot of bees since the war. To have brought them up to this level the figures that one gave me were prodigious. He also can take the opening text to himself, as in distributing stocks of bees he is enriching the country, as the nectar in the flowers cannot be harvested without bees: the fruit cannot be pollinated without them: the bank balances will not expand so quickly without bees, even the Excise will be the gainer.

Our bees this week are flying strong on the gorse and snowdrops. I find that those that are more exposed to the sou-west winds are stronger than those that are inside of walls, the hives do not dry so quickly as those that are more exposed. Those in the Valley apiary are much more active in the fine mornings of this last week; catkins of hazels have a lot of bees on them. They are also flying round the alder trees, but they were too high up to see what they were collecting. Yellow crocuses are expanding, but the bees have not found them yet, pollen is not advanced enough; the older the flower gets, the pollen bearing anthers seem to elongate, the coloured petals making a sort of hood over to keep them dry. In some soils these flowers increase rapidly, they will seed and spread themselves, in others they only seem to "mark time." I once altered a pathway among snowdrops and crocuses, after the fine gravel got hard I had it tarred

over to make a firm surface, but these bunches of blue crocuses forced their way through the surface of gravel and tar; they come through every year, bees are more fond of these flowers than any other bulbs, flowering as early as they will do is the chief reason.

When writing of the Wimborne bee-keeper who had increased his holding, I omitted to mention that he has now a motor to run his stuff to the markets. He can deliver his produce direct to the hotels in Bournemouth, and so get the increased price without the middle man getting a profit out of it. Many of our fruit-growing bee-keepers are doing their own transport with motors now, they find that they are so much faster than horses; they can get home to work again early. Men like these are helping on the nation with home-grown produce, so keeping the wealth in this country, rather than send to other countries. Why do the people of this land spend so many thousands every month for foreign honey, and let our own waste in the fields? It is not to me a wise piece of political economy; "it is what one does in life that counts."—J. J. KETTLE.

Jottings from Huntingdonshire

Rain at last! O, yes, we have had showers and rainy days, but they were scarcely sufficient to soak the land. Now the rain we have longed and prayed for has come, filling our hearts with joy and making the farmers smile. It began early in the morning, continued with a slight break right through the day and the night following, and the morning of the next day. The ponds began to fill, and the river—dry since April last—to flow. And what an event the latter was. News was brought from the upper reaches that water was running down the course We made for its banks to see the sight. Alas! the bed was dry. Was it all a mistake? It was not, for around a bend came the flowing current; it travelled slow, there were holes to be filled. Some were known as bottomless pits, and have never previously been dry, but last summer revealed the bottoms to be in no case more than 20 ft. down. Hole after hole was filled, and the current flowed on, covering up the grass and weeds which had grown during the spring and summer. It was a lovely sight—surplus water claiming its right to flow back to the sea. About 11 o'clock the clouds dispersed, and the sun shone forth; the thermometer went up as the barometer went down, and soon the meads and highlands were all asteam, then out came the bees literally tumbling one over the other in their anxiety to take wing. They went wild with delight. They circled, made figure-eights, looped the loop, gambolled, played all manner of games, came up and hummed in one's ear, and hustled off faster than they came. They were out to enjoy themselves, and knew how to do it. The winter aconites were inviting visits, but in vain. The timid snowdrops were also ignored. At 2 o'clock more clouds gathered, and the bees fled homewards, and such numbers! One hive had so many aboard that there was congestion at the entrance as they all returned. A passer by stopped and gasped, "What! a swarm?" "Not yet," I replied, "but they must be strong in numbers within the hive to spare so many to take wing." I examine hive after hive, and note that the stores of candy are being depleted apace. A few weeks hence and half the queens will be laying, and much pabulum will await them. The hazel catkins are ready for visits. The aconites are in full blow, with the snowdrops. Crocuses are showing bud, the coltsfoot and dandelion are already flowering in sheltered corners, and the recent rain will do wonders with the embryo flowers, unless frost and piercing winds should succeed this spell of mild.

In those districts where the weather changes rapidly—from warm and sun in the morning to sun and cold in the afternoon—precautions will be taken against spring dwindling, especially with hybrid bees. Some, like myself, will be thinking of requeening in April. Those queens who have persistently oviposited throughout the winter will not be fit to carry on through the spring and summer unless they be young.

The beeches and elms are enriching their twigs with dainty buds, their topmost branches waving in the breeze like delicate needlework wrought about with divers colours. The young lambs kick their hind legs in the air; the thrush, the robin, and the wren are tuning up for nesting time. The rooks visit their nesting-places, and chatter away to the daws and starlings. How I wish I knew what they were saying. But one must be content to learn the language of the bees. Insects so small, with minds so large. What have the psychoanalysts to teach us? Does the bee only depend upon instinct? I think not.

E. F. HEMMING.

Steeple Gidding, Peterborough.

A Ramble in Lincolnshire in May, 1921.

By TOM SLEIGHT.

(*Continued from page* 22.)

I had read in the "B.B.J." of Roper's at Thorpe-on-the-Hill, and I was getting close to it. At last, I thought, I am going to have some free-wheeling if this place is on such a hill as the name makes one appear to expect. Well, it certainly is not in a hollow, but if being 20ft. above the surrounding country constitutes it a hill, then I'll call it one, but I climb some hills around Ashover that Thorpe people would term Mount Everests if they saw them. But anyway, there was a glorious view of Lincoln Minster, six miles away. The sun did sparkle on the windows, and I was near going to see it but was glad after that I did not, for before 10 p.m. I had had enough for one day, it being 5 p.m. then.

I found Mr. Roper a most interesting chap, but he had lost heavily in the winter. From 109 stocks put down to winter, only 30

survived. Out of twelve of Claridge's guinea queens only one had lived, and to that hive, in his angry moments, he had fed the combs from some of the worst crawling stocks, with the result that there were eleven combs of brood, and bees covered seventeen combs that day. They were in what was like a Wells hive, the brood box holding twenty combs. He said, "What can you make of a complaint like that, when what one lot of bees have died on won't kill another lot? I tell you what, Mr. Sleight, in my opinion 'I.O.W.' disease will come and go, and nobody will know what cures it." He showed me the remains of his Dutch stocks in their quaint old skeps; some of them had died with "I.O.W" disease, and those left were busy on a field of white turnips in bloom a little way off. He said how heavy the skeps had got since he picked one up a few days before. I had a look in those turnips; they were a yellow mass of bloom 6ft. high. Mr. Roper is a young bee-keeper, who is going to have some bees some day, and some honey, too, if only he can get some stocks on to Lincoln Heath, as they call it. He said he was always pleased to have a chat with any bee-man, but he was very busy at his trade, having orders to get off that night. I did not like to hinder him any longer, so I sped on my way to Eagle.

Eagle seems to be a place like Thorpe, on another little knoll of a hill, while all the country around is quite flat. From there to Spalford, where the sand is like the sea sand, on lanes where biking is a glorious treat, but would not be on dark, foggy nights, as ditches on each side are too deep. A good many fields seemed to grow nothing but gorse and rabbits, and what a yellow mass the gorse was! If there is honey in gorse sure bees could have got gorse honey here: there were such quantities of it. That land does not seem to grow clover, as I never saw any on it—a poor place for bees when gorse has flowered, I should say.

Travelling on, I come to South Clifton, through there to North Clifton, where I ended up in a farmyard. I asked, "Is Dunham Bridge anywhere here?" "No, you will have to go back up the street, and take the Gainsborough road to Newton before you get to Dunham." Just as I turn on the Gainsborough road I spied a board up, "Honey for sale." Hello! I thought, some bees here; I'll just see over the gate how many hives he has got, and the bee-keeper stood inside. I said, "Well, how's the bee trade?" He replied, "Are you a bee-man?" "Yes." "Well, come and have a look at my little lot." I have never come across a better arranged apiary in all my travels: everything was arranged to get some honey, and I know he has got some since then.

There were five hives supered then, and 3lb. of honey in one he showed me on May 5. "Why," I said, "we shan't have honey in supers till June." When I had honey in supers from clover on the moors I went again to look in that hive, and he had taken 130lb. from it alone, and mine were just starting. He said, had as the season was last year (1920) he took 210lb. from two hives. It is surely a good early part for honey. He proved a very interesting companion for an hour's chat, and his garden, of that seaside sand, was clean and well looked after. He said that notice-board sold nearly all his honey, it being the Newark to Gainsborough turnpike; people going by in motors called for 5 and 10lb. at a time. I have an idea his bees crossed the Trent to Marnham for most of their honey, for there seemed little forage growing near his house, only red poppies. I had to get on, as it was turned 8 p.m., and I had a long way to go, round Newton, over Dunham Bridge to Ragnal, where along that side of the Trent the hedges were one mass of May bloom. Passing Fledborough Station and Marnham as darkness set in, I reached Grassthorpe after one of the loveliest days out on a bike, having done fifty miles on a very nearly dead flat in just over twelve hours. I was indeed glad that I had not gone to Lincoln, for I had had quite enough.

"Lest We Forget."

200,000 BRITISH SOLDIERS LIE UNDER THE SOIL OF THE YPRES SALIENT.

Some time ago the "B.B.J." published a Roll of Honour giving the names of bee-keepers who served with the Colours during the Great War. As the Editors then truly pointed out, considering the very pacific nature of the craft, it was well represented.

To those ex-Service men who fought in the Ypres Salient and to the next-of-kin of our comrades who sleep beneath its soil, I make an appeal on behalf of the Committee of the Ypres League.

Ypres—the Gate to Calais—is the Holy Ground of British Arms. The history of its defence is that of heroic self-sacrifice and superhuman endurance. It is to the British Empire what Verdun is to France. To me its very atmosphere was different to that of other battlefields. It seemed to promote the growth of a higher spirit of that comradeship which helped to turn an intolerable existence into something worth living for. And it is the first object of the League—

> "To keep alive the spirit of comradeship which had its birth in those stirring and critical times, and to commemorate the comrades who fell in that immortal defence."

Members of the League include only:—

(1) Those who actually served in the Ypres Salient.

(2) Near relatives of those who died there.

I sincerely trust that all bee-keepers who are eligible will write for a form of application for membership to me or to the Secretary, Ypres League, 23, Henrietta Street, Cavendish Square, London, W.1. The subscription is only 5s., and even this small sum is not insisted upon from unemployed or anyone in straitened circumstances.

Mr. Bernard Partridge has designed a beautiful scroll, and a copy is presented to every ex-soldier member certifying "Membership of the Ypres League of officers and

men who served in the immortal defence of Ypres, 1914-1918." Relatives receive the same scroll with the certificate that their Hero "laid down his life for King and Country in the immortal defence of Ypres." As long as books of history are written, the possessors of these scrolls will cherish them with pride.

Members also receive quarterly the "Ypres Times," which is always full of interest to anyone who knew "Old Wipers."

There is not enough space here to detail all the advantages of membership, but I shall be real glad to give full particulars to prospective members.—C. WEAVER PRICE, Lieut.-Colonel (late Tank Corps), Ashgrove, Brecon.

Bee-Keeping in New South Wales.

We received the following interesting letter, written on December 2, 1921, from Mrs. E. Phillips, Ballingarra Road, Miranda, near Sydney, N.S.W., which we take the liberty of publishing, as it may prove helpful to some intending emigrant :—

As an old bee-keeper and one-time subscriber, I take the liberty of sending an advertisement which I trust you will find space for in your valuable journal. One or two seeing it might make up their minds to try sunny N.S.W. and help to people this vast and empty island continent. On my arrival here I wasted much valuable time going about looking for a suitable spot to settle down, and would be pleased to give intending immigrants the benefit of my experience, enabling them to make arrangements for securing a small holding as a going concern, to which they could come direct. Hundreds of families in this district are making a good living from a five- or ten-acre farm, and there is a constant demand on the Sydney market for fowls of all ages, ducks, turkeys, fruit of all kinds, honey and wax, pigeons, vegetables of all kinds, pigs, etc. Milk is 8½d. per quart; eggs, 1s. 10d. per dozen, and a rising market; acres of violets, narcissus and daffodils, rows of sweet peas, and other things suitable for the Sydney market. The bees have a busy time all the year. They enjoy the peach and apricot blooms, but simply revel in the orange blossoms, which keep on blooming for quite a long time. A small quantity of white clover has got a start, and is spreading fast. Now they are working on the gum trees and wild apple. From enclosed cutting you will see Sir Joseph Carruthers is going ahead with his million farms for a million British farmers. I hope he succeeds.

Ilford and District Bee-Keepers' Association.

(LOCAL BRANCH OF THE ESSEX BEE-KEEPERS' ASSOCIATION.)

The second annual general meeting of this Association was held at Broadway Chambers, Ilford, on Wednesday evening, January 25.

Before the meeting opened, Mr. G. R. Alder, hon. secretary to the Essex Bee-keepers' Association, presented the preliminary certificates in bee-keeping to Messrs. Cornwell, Knight, and Woode, and announced that Messrs. Cornwell and Knight had passed the intermediate examination also.

ANNUAL REPORT.

In presenting the second annual report attention is called to the varied activities of the Association. During the winter session of 1920-21, a series of indoor lectures were given which covered many phases of bee keeping; following these was the opening of the educational and experimental apiary in the Valentines (Public) Park, by the kind permission of the Ilford Council, where a further series of outdoor lectures with practical demonstrations were given during the summer season, culminating with an examination by Mr. J. Herrod-Hempsall, F.E.S., for preliminary certificates of the British Bee-keepers' Association, the candidates coming not only from our own Association, but also from the Essex Association, all being successful.

At the Seven Kings' Flower Show in July, Mr G. R. Alder (secretary, Essex B.K.A.) gave a lecture with demonstration in the Bee Tent, which was greatly appreciated by those who had the pleasure to listen to it; whilst Mr. L. L. Davey exhibited an observatory hive with bees and queen. Later, at the annual show of the Ilford Utility Poultry Society, an exhibition of honey and bee-keeping appliances was staged, in which a great deal of interest was displayed by a large number of visitors, and following this, at the Public Hall, Seven Kings, Mr. W. Herrod-Hempsall, F.E.S. (hon. secretary, British B.K.A.), gave a popular and interesting lantern lecture to the delight of a large audience. Mr. G. S. Faunch also gave a lecture and talk on bee-keeping to the Goodmayes Women's Pleasant Afternoons, which was quite a unique feature and was of much interest and profit to the audience.

During the season the experts visited most of the members and by examination and advice gave what help and assistance was at the time needed. It is pleasing to be able to report a clean bill of health, no case of "Isle of Wight," or any other disease being apparent among the bees. Some 40 stocks were examined, 27 of which could be claimed as strong; several of the remainder, however, were in the condition to term nuclei only. Every effort was made to respond in the fullest degree to any request for information and so several further visits were made to members' apiaries. The honey yield was fairly good, but without doubt would have been much better if it had not been for the unprecedented weather. The experts state that they find it their duty to recommend members to pay more serious attention to bee-keeping generally and much benefit would be derived by regular attendance at lectures and demonstrations, especially at the Association's apiary in Valentines Park.

By the foregoing it will be seen that during the past year the activities of the Associa-

tion have been continuous and progressive and an earnest endeavour has been made to promote a higher standard of bee-keeping. In conclusion, it might be said that our prospects for the coming season are full of possibilities and with the hearty co-operation of all our members should be a profitable and successful one.

Expenses for the year amounted to £6 17s. 11d. and receipts £8 16s. 6d., leaving a balance in hand of £1 18s. 7d.

The report and balance-sheet as printed were duly accepted and passed.

A vote of thanks was returned to the retiring officers, and the following officers were elected for year 1922 :—President : F Wise, Esq., M.P. Vice-Presidents : Councillors G. Cunary, H. G. Odell, and B. S. J. Pitt ; R. Stroud, Esq., J.P., and G. S. Faunch, Esq. Chairman : Mr. A. E. Cornwell. Executive Committee : Mrs. K. M. Wootton, Messrs. W. F. Judge, B. G. E. Knight, A. L Woode, and L. Wootton. Secretary and Treasurer : Mr. H. Stroud. Aditor : Mr. A. L. Woode.

A cordial vote of thanks was duly accorded to Mr. Knight for his services whilst in the chair during season 1921.

H. Stroud. Hon. Sec.

Barley Lane, Ilford.

South Staffordshire and District Bee-Keepers' Association.

ANNUAL MEETING.

The annual meeting of the above Association was held at the Station Hotel, Dudley, on Saturday, January 28, 1922.

A. B. Whitehouse, Esq., presided : there were about 50 members present.

The Hon. Sec. (Mr. W. J. Walton) reported the proceedings of the Association for the year 1921.

There had been five committee meetings, four outdoor meetings in the summer, one each at Hagley Hall Gardens, Stourbridge : Warley Wood ; Agricultural Institute, Penkridge ; and Mr. E. H. Hipkins' Apiary, Tipton. These meetings had been well attended. Demonstrations, addresses and discussions on bee craft were given, and proved instructive and interesting.

A members' honey show was held, which was very successful in numbers present and exhibits.

A series of six lectures on Practical Bee-Keeping had been given. Seven members had obtained the preliminary certificate in modern bee-keeping, and two members the intermediate certificate.

There were 150 members on the register, 10 had resigned and 27 new members added.

The work of the Association had been very instructive and helpful to its members, and the social side had many advantages, which was good for the Association and members individually.

The Secretary presented balance-sheet, showing an income of £41 7s. 5d., an expenditure of £40 2s., and a balance in favour of the Association of £10 9s.

The balance-sheet was approved and adopted, and a vote of thanks passed to the Hon. Secretary for his report.

The officers and committee were elected for the ensuing year, as nominated by the committee.

The Chairman presented preliminary certificates to the following successful candidates :—Miss Manley, Mrs. Sheldon, Miss Hinchley, Rev. W. H. Richardson, Mr. E. C. Hipkins, Mr. C. F. Stirzaker, and Mr. P. Shuttleworth.

Tea was served in a very commendable manner by Mrs. Jones, manageress of the hotel, after which a lecture, illustrated with lantern slides, on "The Anatomy of the Honey Bee, and Bee Diseases," by Mr. J. Price, Stafford county expert and lecturer, was given. The lecture was very instructive and of great interest. At the close a vote of thanks was passed to Mr. Price for his services

A vote of thanks to the Chairman who so ably presided, brought the meeting to a close.

W. J. Walton,
Hon. Sec.

The Amateur's Anthem.

A was my Apiary, active, alive!
Brimful of beautiful Bees in each Hive.
C were my combs, standing rank upon rank,
D my Drone dandies, which dawdled and drank,
Endless my Eggs which enchanted the eye.
Faithful my Fanners—heads low and tails high.
G were my Grubs, egregiously growing ;
H were my Hives with Honey o'erflowing.
I were my Imports, from Italy's shore,
Immune from infection ; could one wish more?
J were the Jibes of my jealous compeers ;
K was my Kudos which silenced their jeers.
L was the Lure of the life which I led,
M was the Murmur of bees overhead.
Nuclei nurtured my Nymphs of great size.
O was my Output, which opened all eyes.
P was the "Peep" of my princess unhatched ;
Q were my Queens, which could not be matched.
R was the Roar—like a gathering storm
Sounding the Sibilant Song of the Swarm.
T was the Tom Tit's tentative tapping ;
U was the Upshot : some were caught napping.
V was my Vaseline, viscous and thick,
Wiped where wax-bracing would make the parts stick.
X was "Xyloretine"—resinous stuff—
(Hardly propolis, but that's near enough!)
Y was my Yield which increased year by year,
Zeal "zoomed" to the Zenith ; banished was fear!

—H. H. E. A.

CORRESPONDENCE.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real name and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

Bee-Keeping for the Young.

[10628] At the risk of appearing tiresome I am venturing to write once again on the need of teaching bee-keeping to children. In my opinion, the great hope of the future is with the youngsters, and every association should be on the alert to see that proper instruction is available, or it may be that instead of going forward we shall go back.

The ignorance of some instructors is appalling. I need only refer to the instance given in the BEE JOURNAL a few weeks back. There is some talk of teaching bee-keeping in schools, well this is certainly something; but I suppose it will be carried out, like other subjects, without regard to the suitability of the scholar, or the knowledge of the teacher. This latter is probably the greater danger, for unfortunately the scanty amount of information some teachers have must be heard to be believed. This is a sample. A very good mistress of a fairly large elementary school visited my apiary in the winter time, and listened with much admiration to the little I could tell her. On going round the apiary she observed a large patch of winter greens "Oh, yes, I see you plant those for the bees to feed on in the winter" (fact). Imagine the lady instructing a class!!

Now I hold that associations can do a vast amount of really good work, both by offering to instruct school teachers and by running classes themselves. The ground for the latter method is ready. Scouts, boys' brigades, girl guides and similar bodies could be approached, and really good work carried out. Bee Farmers' Clubs could be formed, if the right people can be found.

Youth is the time to learn. Let us see to it that the young have the opportunity to learn *our craft;* at any rate, so that after our time better men can carry on our work.—G. J. FLASHMAN.

Free Wallflower Seed.

[10629] I have a small quantity of a new variety of orange wallflower seed which is peculiarly suitable to bee-keepers. While the supply lasts, will distribute gratis on receipt of stamped addressed envelope.—J. H. LEE, "Little Bowden," Burgess Hill, Sussex.

"Bee Journals" for Disposal.

[10630] I have 2½ years of BRITISH BEE JOURNALS. Anyone can have them on paying carriage.—A. MACINTYRE, 116, Oak Bank, Mid Calder, near Edinburgh.

Questions, &c., for Bee-Keepers for Self-Examination.

625. To what uses can driven bees be put?

626. Compare the different races or strains of bees from the point of view of comfort and ease in manipulating.

627. How do bees breathe? Show by a sketch the position of the breathing organs.

628. Describe fully the foundation which should preferably be used in brood frames, in shallow frames, and in sections, respectively.

629. Suggest how a proposed location for an apiary should be examined, with a view to a honey crop.

630. In what respects can an examination of a colony of bees in a skep be made, and how should it be done?

631 What are the advantages of commencing bee-keeping with a swarm instead of with a stock?

632. How may a bee-keeper work up a good strain of bees from the bees in his own apiary?

J. L. B.

Trade Catalogues Received.

Robert Lee, George Street, Uxbridge.—The old-established business of Messrs. Jas. Lee & Son has now been taken over by Mr. R. Lee, owing to the retirement of Mr. Jas. Lee. This will, however, make no difference to the conduct of the business, as Mr. R. Lee has had sole control of the bee-keeping section for the past twenty years, and the goods supplied will be of the usual high quality. We notice the re-introduction of several illustrations, including the Brice swarm appliance and the Brice observatory hive. The Adminson specialities are also illustrated in its 40 pages.

Messrs. Pearson & Gale, Marlborough, Wilts.—This firm appears to be making good headway, owing, no doubt, to the energy and enterprise of the proprietors. The queens, stocks and nuclei supplied by them last season gave every satisfaction. A special point is the supply of queens by return post. Nearly 2,000 queens were sent out last season. A feature this year is the supply of stocks in April, if weather conditions permit. Their activities are also being added to by undertaking the supply of appliances.

Messrs. Steele & Brodie, Wormit Works, Fife.—An excellent catalogue of 72 pages. This well-known north-country firm are the British agents for Messrs. Dadant's foundation. A very useful appliance that has not been much used in this country, the electrical embedder for fixing the wire in foundation, is listed and illustrated; also Dr. Rennie's crawler trap. Scottish bee-keepers depend more on the heather for their surplus than most others, so Messrs. Steele & Brodie cater especially for their wants, and

a comprehensive list of "Heather" hives, honey presses, etc., are illustrated. A couple of pages are devoted to hints for beginners, which give some sound advice, though we notice the division board is called a "dummy."

Mr. R. Whyte, Orme Lodge Apiary, Cumbernauld Station, Dumbartonshire.—As our readers will be aware, Mr. Whyte makes a speciality of the supply of Dutch bees, being the sole agent for Hans Matthes, the well-known Dutch bee-farmer. The 1922 catalogue is enlarged, in order to amplify the hints on the management of Dutch bees, and other particulars given in previous catalogues. The "Cumbernauld" hive and the "Whyte" nucleus cage, both designed by Mr. Whyte, are also listed and illustrated.

Mr. J. B. Ballantyne, Hazelbank, Lanark.—Mr. Ballantyne is comparatively a newcomer among appliance makers, his catalogue in five leaflets being confined to the Convertible Unitive, the "Clyde" beehive, the J.B. floor stand, and the J.B. double-purpose section-extracting shallow frames and other appliances of his own designing. The hives are, we believe, unique, in that they are easily convertible to take either British standard, deep standard, or commercial frames.

Catalogues from any of the above will be sent post free on receipt of a postcard.

Notices to Correspondents

Correspondents desiring an answer in the next issue should send questions to reach this office NOT LATER than the FIRST POST on MONDAY MORNING. Only SPECIALLY URGENT questions will be replied to by post if a STAMPED addressed envelope is enclosed. All questions must be accompanied by the sender's name and address, not necessarily for publication, but as a guarantee of good faith. There is no fee for answering questions.

J. C. M. (Norfolk).—*Creosote for hives.*—Creosoting the hives will not poison the bees. We are surprised, however, to hear of the wasps using creosoted wood for material for their nests.

Hive porches.—We prefer one that protects the alighting board from the wet. The only disadvantage of a wide porch that we can see is they are likely to be in the way if the hive is moved any distance.

"Cotswold" (Glos.).—*Weight of candy from 1 lb. of sugar.*—We cannot say exactly what weight of candy 1 lb. of sugar would make from full quantities given in Brother Columban's formula. Perhaps some of our readers who have tested it can give the information. As all well-made candy will contain the same amount of water, the formula employed will make no difference to the weight. Cool the candy to about 120 deg. Fah. before stirring.

C. G. (Moseley).—*Decoy hives.*—We had several letters and articles on this subject in the "B.B.J." last October. A swarm of bees will often take possession of a decoy hive, but if the owner has followed them he can claim possession. To place a decoy hive in the garden is not a method of starting bee-keeping that we can recommend. Your friend had much better purchase a swarm.

Suspected Disease.

"Perthshire." "Sapper" (Stamford), J. B. (Comrie).—The bees sent were suffering from Acarine disease. Very little can be done in the way of treatment at this time of year beyond keeping the hive supplied with some germicide, Apicure, "Bacterol," Naphthalene, Smith's Eclipse Pad to mention a few, may be used. When the weather becomes warmer bees and combs may be sprayed with one of the advertised remedies. Any candy or syrup given should be medicated.

A. W. M. (Inverleithen).—We could find no Acari in the queen.

Special Prepaid Advertisements.

One Penny per Word.

Will advertisers please read these Rules carefully in order to save trouble, as they will be strictly adhered to.

Trade *advertisements of Bees, Honey, Queens, and Bee goods are not permissible at above rate, but will be inserted at* **1½d.** *per word as* **"Business"** *Announcements, immediately under the Private Advertisements. Advertisements of Hive-manufacturers can only be inserted at a minimum charge of 6s. per ¼in., or 12s. per inch.*

PRIVATE ADVERTISEMENTS are only intended for readers having **Surplus Stock** *to dispose of.* **Driven Bees, Nuclei,** *and* **Queens that are reared or imported for sale,** *are Trade Advertisements, and can only be accepted under trade terms. A charge of 6d. extra per insertion will be made if a box number is used.*

Advertisements must reach us NOT LATER than FIRST POST on MONDAY MORNING for insertion in the "Journal" the same week.

Orders for three or more consecutive insertions in "The Bee Journal" entitle advertisers to one insertion in "The Bee-Keepers' Record" free of charge.

PRIVATE ADVERTISEMENTS.

GOOD Light English Honey, granulated, £7 cwt. on rail, tins free, deposit system; sample 4d.—SACK, Barley, Royston, Herts. b.23

20 STRONG STOCKS, Italian Hybrids, good working strain; free from disease; satisfaction guaranteed; April-May, 90s., carriage paid; Hive, 20s.; box 10s. extra, returnable.—REV. COOPER, 62, Park Hill, Carshalton. r.b.28

SEVEN unbound volumes BEE JOURNAL, 1915-1921. What offers?—BEESON, Southwell, Notts. b.30

APPLIANCE BARGAINS FROM HEALTHY APIARY.—Taylor Geared Extractor, 45s.; useful "Cottage" ditto, 27s. 6d.; Taylor's Excluders, 1s. 9d.; sound Rapid Feeders, 2s.; 10 shallow racks excellent Drawn Combs, 10s. each; 20 racks complete Foundation, 8s. 6d.; Cottage Hive, with frames, legs, 15s.; all excellent condition; carriage paid.—BOWEN, Apiarist, Cheltenham. b.34

SECTIONS WANTED.—F. E. ASHLEY, Lincoln House, Teddington. b.38

FINEST KENTISH HONEY, 28-lb. tin, 36s.; £7 per cwt., f.o.r.—RIVERS, Downs Road, near Southfleet, Kent. b.41

A FEW SWARMS for Sale from healthy stocks, May and June.—E. CHRISTIE, Oxted Road, Godstone, Surrey. b.42

FOR SALE, several gross red earthenware Honey Crocks, "glazed inside"; will hold about 7 oz. honey; 6s. 6d. gross.—PARTRIDGE, 174, South Ealing Road, Ealing, W.5. b.44

BEE-KEEPER, experienced all branches, good carpenter, wants situation.—Box 53, BRITISH BEE JOURNAL Office, 23, Bedford Street, Strand, London. r.b.45

BARGAINS.—Surplus, owing to adoption of commercial hives, two Taylor's W.B.C. Hives, each complete with two lifts, two supers fitted hanging section frames and separators, good as new, painted, each 30s.; one W.B.C. Hive complete, two lifts, one shallow super, painted, 25s.; one W.B.C. modified Non-swarming Hive, two lifts, one shallow super, painted, complete, 32s. 6d.; one Taylor's Single-walled Hive, telescoping lift for winter, one section crate, suitable cottager, painted, 20s.; one Single-walled Hive, complete, two lifts, one section crate, painted, 17s. 6d.; also two Super Clearer Boards, each 2s.; six Section Crates, each 2s. 3d.; accept £7 10s. for lot. Guaranteed free from disease.—F. C. H., Mill Cottage, Sutton, Ludlow, Salop. b.45

FOR SALE, 56-lb. tin of pure Cambridge Light Honey, quite solid, 1s. 3d. per lb., or nearest offer; tin free; sample 4d.—SULMAN, Wilburton, Ely, Cambs. b.46

SWARMS booked for coming season, May and June, 25s. Cash with order. 5 cwt. first-grade Honey for Sale, the lot or divide.—HALFORD, West Wratting, Cambs. r.b.47

GUARANTEED PURE ENGLISH HONEY, in 1-lb. clear glass screw-top jars, 3 gross. What offers, lot or part? Also three White Wyandotte Cockerels, laying strain, nine months, well grown, hatched from eggs of "Daily Mail" test for two-year-old hens (1920-21), mated with cockerels bred from prize birds of the previous year's test.—P. TAYLOR, Mill Cottage, Hazeleigh, Maldon, Essex. b.48

FOR SALE, four strong Stocks of Italian Bees, Supers, Extractor, Ripener, etc. List sent. Must be removed by the end of April.—TURNER, 2, Miles Road, Epsom. b.49

GARDENER-BEE-KEEPER requires situation, experienced inside and outside work; speciality, fruit culture.—WM. HODGINS, Gelli, Crynant, Neath, Glam. r.b.51

FINEST SUSSEX HONEY, £8 per cwt., tins free, carriage paid.—W. ROBERTS, The Thorne Apiaries, Ninfield, Battle, Sussex. b.7

BLACK CURRANT BUSHES, two years, 6s. dozen, 3s. 9d. half, carriage paid; Wells' Hive, takes 16 standard frames, two dummies, new, never used, painted, 40s.; three new Hives, take 12 frames, painted, 30s. each.—SMITH, 72, Norton Street, Birmingham. b.5

CHANNEL ISLANDS.—Small Model Apiary for Sale, capable of extensive enlargement; no disease; no rival apiarists; good local honey sale; opening for poultry farming in conjunction.—Box 51, B.B.J. Office, 23, Bedford Street, Strand, W.C.2. b.11

WANTED, to rent or purchase, Cottage and Ground up to 4 acres, within 25 miles of London, preferably N.W. For Sale, six 6-frame Stocks with imported Italian or home-raised Queens, 54s. or 48s., delivery May and June.—BARRETT, Sunnyside, Cecil Park, Pinner. r.a.60

12 STOCKS ITALIAN BEES on 8 frames, 70s. each, delivery April; guaranteed healthy.—ENNEVER, 2, Oak Avenue, Enfield. a.52

VERY finest quality Hampshire Honey for Sale; 5 cwt. in assorted size tins.—Box 50, BRITISH BEE JOURNAL, 23, Bedford Street, W.C.2. a.24

FOR SALE, six Simmins' Double Conqueror Hives, with section racks and supers, in very good condition, £5 each.—E. R. & A. DEBENHAM, Bladen Dairy Farms, Briantspuddle, Dorchester. r.b.13

CAN OFFER strong surplus Stocks of Bees (Hybrids) on 6 standard frames, wired combs, 1921 Queens, good working strain, mid April delivery, 55s., carriage paid.—WM. CHANNELL, Grove Apiary, Histon, Cambs. a.70

COMPLETE MODERN APIARY FOR SALE, consisting of 40 strong Italian Stocks (1921 Queens), in nearly new 13-frame Hives, zinc-covered roofs, each hive fitted with excluder and two supers; 4-frame Extractor, Ripener, Feeders, etc.; carriage paid in Great Britain; April delivery; £300, or near offer.—Box 48, B.B.J. Office, 23, Bedford Street, Strand, W.C.2. w.11

BUSINESS ADVERTISEMENTS.

1½d. per word.

IMPORTED QUEENS, Italian, Dutch, or Carniolan, May 9s.. June 8s.—DAVIDSON, Forest Road, Burton-on-Trent. b.26

SWISS BEE STOCKS FOR SALE, headed by Queens bred from imported pedigree queens, delivery May. These Black Swiss Bees have been line bred for 40 years, the queens being mated in higher Alpine valleys, no other bees existing within miles, are as purely bred as our best strains of horses, cattle, etc. Swiss Bee Society keep stud books, issuing numbered certificates with all pedigree queens mated at official mating stations. Official numbers of my breeding queens are 564, 92/60 and 93/60. Pedigree queens are not primarily bred for honey gathering, but are used by beekeepers to raise queens for re-queening purposes, these queens through long selection being noted for freedom from swarming impulse. Workers are long lived, and, being kept at all altitudes up to a mile above sea level for honey gathering, give huge colonies, and are most resistant to weather and diseases, standing four months' continuous confinement to hives during Swiss winter without difficulty, grand honey gatherers, giving splendid white cappings to combs. All purchasers can absolutely depend on receiving the Swiss breed I advertise.—DAVIDSON, Forest Road, Burton-on-Trent. b.27

THE NEW FIRM.

SPECIALITIES.

1.—The Convertible Unitive, for Standard, deep Standard, or Commercial Frames.

2.—The "Clyde" Hive, single walled, for 15½ in.—16 in. reduced top-bar frames.

3.—The "J.B." Floor-stand, standard for both 1 and 2. Can be supplied for any hive. Gives instant confinement, ample automatic ventilation, compactness for transport, AND UNIQUE FACILITIES for combating Acarine Disease by vapour treatment. (Does not involve purchase of No. 4.)

4. COMBINATION Float or Bottle Feeder, "Isle of Wight" Disease Treatment Box, Winter Passage, and Spring Inspection APPLIANCE.

5. "J.B." Double Purpose Section/Extracting Frames and Rack.

INVESTIGATE!

Moderate advertising, and the co-operation of progressive bee-keepers to keep down overhead expenses, ensure reasonable prices.

Descriptive Literature, cap. 8vo., 34 pp., 4d.

JAMES B. BALLANTYNE,
HAZELBANK, LANARK.

b.25

DUTCH BEES.—Send for my artistically Illustrated Catalogue outlining my method of managing bees profitably. Read my notes on Queens and Queen Rearing. Will interest the expert and amateur. Free for the asking.—WHYTE, Bee Farm, Cumbernauld Station, Dumbartonshire. r.b.32

ASSISTANT wanted, to assist in commercial apiary. State experience and wages expected. —Box No. 52, B.B.J. Office, 23, Bedford Street, Strand, W.C.2. b.33

BEES, noted disease-resisting strain. Limited number of Stocks April, May, Nuclei onwards; prices moderate; orders in rotation.—SMITH, 5, Florence Terrace, Ramsgate. r.b.35

SPECIAL OFFER FOR EARLY ORDERS.—Straw Skeps, flat top, with or without hole, 3s. 9d. each, six for 19s. 6d.; cane bound, 4s. 6d. each, six for 24s.; straw caps, 2s. 9d. each, six for 14s. 6d.; carriage forward; quantities cheaper.—A. LONGLEY, 35, Tharp Road, Wallington, Surrey. b.36

ORDER NOW your Bees and Appliances, Stocks, Nuclei and Queens; also joiner-made 12-frame Hives. Write for particulars.—J. H. ROPER, Thorpe-on-the-Hill, Lincoln. b.37

ASTOUNDING OFFER. — Finest Imported Italian Queens below pre-war prices. Heavy Italian Swarms, April and early May, £2 5s. These swarms weigh 3½ lbs., and are headed by 1922 Imported Italian Queens. Stamp for particulars. You cannot buy better bees.—AMBROSIA APIARIES, S. Farnboro', Hants. Above swarms nearly all booked; only a few left for April delivery. Cannot repeat offer. r.a.71

BRITISH bred Italian Nuclei and Queens. Prices on application. — CHARMAN BROTHERS, West Hill Apiary, Brookwood. r.b.4

BEES FROM HOLLAND.—The best Dutch Stocks offered in original skeps (in crates of six skeps). Moderate prices. Delivery March. Price List on application. Send postcard to-day.—HENK v. LANGEVELD, Gasthinsringel 42 rood, Haarlem. b.12

I HAVE a few hundred new Standard Brood Frames, 19s. 6d. 100; Wide Shallow Frames, 20s. 100; carriage paid; cash with order. Don't delay.—TUNMER, The Apiary, Maldon, Essex. r.b.19

BENHALL BEES.

A LIMITED number of really good 3-frame Nuclei, headed by purely-mated 1922 Italian Queens, during May £2 10s. Cash with order.—RIVIS & GRAY, Benhall, Saxmundham. r.a.7

DUTCH BEES, in skeps, £3 10s., carriage paid, March delivery.—COBB, 33, Bevan Road, Plumstead. r.a.73

JACK TICKELL.—For Queens, Stocks and Nuclei. List free. — Westbourne Apiary, Cheltenham. r.a.54

SEND FOR A COPY OF

OUR 1922 CATALOGUE

The Largest Bee Appliance Manufacturers in Europe.

White Candy—4 lbs., 5/- post free ; 10 lbs., 11/- post free. Glass top boxes (2 lb.), 4 lbs. 5/- post free.

E. H. TAYLOR, Ltd., BEEHIVE WORKS, WELWYN, HERTS.

THE SOUTH HAMPSHIRE APIARIES (Newton and Clarke) are now booking orders for Stocks, Nuclei and Queens. Best strains only bred. Speciality, 5-frame Nucleus. Honey and Wax Bought and Sold.—All communications, H. E. NEWTON, New Milton, Hants. b.39

BOOK NOW!—Choicest home-bred Carniolan Queens for 1922.—PEARSON & GALE, Marlborough. b.24

MY CHOICE GOLDEN ITALIANS, favourites amongst prominent apiarists, are again offered in rotation. Queens and Nuclei.—E. COOMBER, Breeder of Superior Golden Bees, 64, Ronald Park Avenue, Westcliff-on-Sea. b.40

STRONG Italian Hybrid Stocks, 1921 Queens, guaranteed healthy, splendid workers, 8 frames, 70s.; 10 frames, 85s.; three Stocks for £12. Booking now for April.—STANCLIFFE, Middleton, Pickering. b.50

QUALITY ITALIAN NUCLEI, 4-frame (3 frames brood), headed by 1922 Queens bred from special imported breeding queen, £2, carriage paid; delivery June.—E. W. D. MADOC, Mattishall, Dereham. b.29

COLONIAL HONEY FOR BEE-FEEDING.—Australian new white, 60-lb. tin 39s., two tins 77s.; finest West Indian, 56-lb. tin 41s. 6d., two tins 75s.; carriage paid Great Britain.—LONDON TRADING AGENCY, 32, St. Mary Axe, London, E.C.3. b.52

MAY SWARMS, £1 12s. 6d., packing, carriage free; 4-frame Nuclei (May), 42s., carriage paid; boxes 8s. extra, returnable.—H. WELCH, Wickham, Hants. r.b.22

PUPILS WANTED. — Opportunity to learn commercial bee-keeping, honey production, and queen-rearing, out apiaries; 150 colonies maintained.—Terms and particulars from CLARIDGE, Copford Apiary, near Colchester. r.a.47

200 LBS. HONEY, 10 Stocks, from one Queen, Melton ex Simmins; proved honey producers. Queens, Stocks, Nuclei, Swarms. Book now.—MASON, Melton Apiary, Willerby, Hull. a.37

WE OFFER WITH OUR STOCKS AND NUCLEI an absolute guarantee against Acarine disease to Saturday, September 16, 1922.—Details from THE WELSH BEE GARDENS, Ashgrove, Brecon. (Proprietor, Lieut.-Colonel Weaver Price.) Really highest grade Italians. r.a.62

NUCLEI.—Am now booking orders for my noted 4-frame Nuclei; Simmins', pure Italians, or Carniolans, 55s.; Hybrids, 45s.; carriage paid; 10s. deposit on returnable box. Book early and avoid disappointment. Delivery June-July.—HOWLETT, "Sylvabelle," Tring. r.a.31

CARNIOLANS.—Buy British-bred Queens, and have less trouble with supersedure. List.—SWAFFIELD, Libertus Villas, Cheltenham. r.a.3

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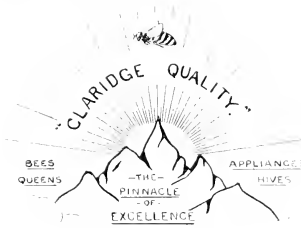

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The Bee-Keepers' Calendar.

FEBRUARY, 1922

16 Thursday. "'Buzz!' quoth the Blue-Fly;
'Hum!' quoth the Bee;
'Buzz!' and 'Hum!' they cry—
And so do we."—"*The Masque of Oberon.*"

17 Friday. "While birds rejoice in leafy bowers;
While bees delight in opening flowers;
While corn grows green in simmer showers,
I'll love my gallant weaver."
Burns, "The Gallant Weaver."

18 Saturday. "As a shut bud that holds a bee,
I warily oped her lids; again
Laughed the blue eyes without a stain."
R. Browning, "Porphyria's Lover."

19 Sunday. "How doth the little busy bee
Improve each shining hour,
And gather honey all the day
From every opening flower."—*Watts, "Busy Bee."*

20 Monday. "Now in, now out,
They move about,
Yet all in order true;
Each seems to know
Both where to go
And what it has to do."—*Anon., "The Bee."*

21 Tuesday. "One in whose gentle bosom I
Could pour my secret heart of woes,
Like the case-burthen'd honey-fly
That hides his murmurs in the rose."
Anon., "The Loveliness of Love."

22 Wednesday. "One mind rules all. Bereave the bees of him,
And social bonds are snapped, with their own jaws
They rend the honeyed fabric, and themselves
Tear down the waxen storeys of the comb."
Virgil, Georgics, Book IV.

Seasonable Hints.

Breeding will now be going forward generally. Very often, too, we have some of the coldest weather of the year during this month, and it is a wise precaution to add more coverings to conserve the heat in the hive and help breeding forward.

Once again we urge the claims of the food problem. Do not let your bees starve. It is a double tragedy to allow them to do so in the spring, after the winter has been safely passed: but it is in the spring most colonies are lost from that cause. We shall now probably have more days when bees can fly, so from now on flour may be mixed with the candy.

The success or failure of the colony during the coming summer will depend to a great extent on its treatment during the next few weeks.

Most of the appliance dealers have now got their catalogues ready. Send for them, and place your order for any bee goods required as soon as possible.

See that entrances are kept clear, and on warm days keep a look-out for symptoms of robbing.

A Dorset Yarn.

"A time there was, ere England's griefs began,
When every rood of ground maintained its man."

I shall not assert, as Goldsmith did, that every rood of ground will maintain a man, but there are many bee-keepers who have about that amount of land, on which they grow enough vegetables to do them well throughout the year. Their wealth of income, however, is from the number of bees they keep, the nuclei they dispose of, and the swarms they sell. One old Dorset farmer said he would sell anything he had excepting his "missis." He had her for better or worse, and he could not do without her. It is the same with some bee-keepers; if a customer wants an established stock, and they offer enough, they have it; there is £5 for a start towards the year's income. Many of Dorset people are persuaded that it is good to sell anything if a fair price is offered for it, or something will happen to it and spoil the chance of a sale. For instance, on my nearest neighbour's holding there was a young and fine looking heifer, near calving. He was offered a good figure for her, and would not accept the offer; she had milk fever and died. Dorset people always think they must accept an offer if made them, or something may happen if not accepted. One who had a lot of skeps and boxes of bees was offered a pound note each for the lot in spring time. He thought it was not enough, but he said after, he ought to have sold them, as he lost nearly all the swarms that season; he was working away so much that year.

Fifty pounds in nuclei has been made by one bee-keeper who has only a small garden and a rood of allotment. He only does his bees and his land, so with the help of bees a rood of ground (as Goldsmith wrote) maintained its man. What a help it would be to so many of our unemployed artisans if they had a rood of ground and some bees! A lady bee-keeper writes from Yorkshire that there are 62,000 idle on the Tyne, and when the Geddes' axe falls after Parliament meets there will be many more. The panacea for the unemployment evil will be more men on the land, where the necessities of life can be grown by the holder of the soil. Hard work and simple living will give a balance on the right side as the years go on.

A bee-keeper from Evesham only grows on his holding plums and asparagus; both are a boon for bees. Plums are not beautiful like the apples, but they look very pretty as they open their little blossoms on the leafless trees, but asparagus, after the cutting of the succulent growths is finished, will grow up 3 to 9ft. high, light, feathery, miniature trees, covered with so many flowers; all of them are a delight to bees (have described the flowers in detail in past yarns). This bee-keeper has many roods of land, but it maintains him and his family, with other help, in the busy time. It is only those who have seen asparagus in its delightful beauty that can praise it. After the flowers comes the fruit, which will stay on the growth until Christmas time; birds eat them, partridges like to hide under the growth. I have not noticed if they eat the seed as well, but what a harvest for the bees are these millions of small flowers, every flower with its moiety of nectar for bees, and to see them they must get a lot to add to the surplus stores of the bee-keeper.

A noted horticulturist and bee-keeper from Hants came to see us last November. As we walked through the fruit fields and saw the asparagus growing liberally, and seeding freely, he booked me to yarn on this plant at their horticultural society. Can only tell them, as I have before in the "B.B.J.," it only requires deeply worked land, potassic and nitrogenous manures, then it will fruit many years. He has taken many prizes for all that is best in horticulture, and, like myself, will give the praise to bees for the success of his fruit. In the large gardens that he controls there are walls with hollow piers built of brick. Bees have made a home in these hollow piers for many years. Why they should live there so long and breed so fast is beyond my comprehension, as bricks absorb so much water—a builder friend says each brick a half pint. These piers must have one side always wet

when it rains, and damp is most detrimental to bees in winter, for when damp, the frost freezes the covering; it not only makes the bees colder, but will freeze the outside combs of stores more quickly than if the covering was kept dry. Have before written of bees in church roofs, where they have found a way up between the rafters and the lead covering, but here there is board beneath the lead; boards absorb damp, that is if they are not painted.

But I am getting away from my text, "Every rood of land maintains its man." Bees seem to be the only salvation to the very small holder, and he who builds up a comfortable living on God's beautiful earth among flowers and fruit, where he can live "under his own vine and fig tree" before he reaches old age, can "tell it out among the nations" that he has the reward for his labours, and bees have helped him most of all.

Bees were flying three days this last week, even though each night is frosty and cold; from all stocks they were flying strong.

I have two letters about coloured ejectamenta on the alighting board. Mr. Gething, of Chilmark, writes of a new hive with so much of this high-coloured fæces. The roof was faulty; dry weather must have made wood shrink in summer, rain has gone through the crevices; others may have had the same happen with such a dry season. This proves that the stock is not at its best; the bees do this in flight when all is well with them. Each writes for a remedy to stop it; books tell us it is bad food, and frozen stores are a bad food, as they often ferment after freezing.—J. J. KETTLE.

Jottings from Huntingdonshire

"Here comes the Rector, he'll tell us." These words caught my ears as I was passing a farm shed in which were gathered some eleven men having lunch, Old William being amongst them. Near them sat two cats and a dog watching for any morsels which might be thrown to them. It was a threshing day at the farm, and the stack being threshed was wheat. The yield was not quite up to expectations, and like all true sons of the soil the men were as disappointed as their master. To what could be attributed the lightness of the corn? Allowances had been made for the drought, and the general opinion was that a certain weed was responsible, but what was its name? The argument was going on when I appeared on the scene. "Can you tell us what it be?" said Thomas. "The Gaffer, he do call it 'starve acre,' and my old master, I worked for when a boy, called it 'money-out-o'-pocket.' Charles, here do say it's name be 'rich-man's curse,' while Jack sticks out that its proper name be 'rob-the-ground.' What do you call it, sir?" "Describe it first, then perhaps I shall be able to help you," I said, and three or four began describing at once. Here William spoke up and said, "Is that what you be a meaning; why, that's Polly's-got-'em, or Percy-carry-'er." At this Thomas dropped the remainder of his bread and meat, which the vigilant dog at once seized and stowed away. Charles, who was just about to empty a can full of cold tea down his throat, sent it down his shirt instead, and Jack, generally as sober as a judge, burst into laughter and shouted, "Say it again, Bill, say it again." William was calm but sarcastic. "Shows their broughtings up, don't it master? Never did come nigh such an ignorant set o' chaps, never; why we was talking about flowers last year and they didn't know what a methuselah orchis was." The engine-driver's sides were shaking. "Wait, Bill," said he. "Wait till I have finished my lunch, then you can go on and crack your jaw." "'Old thy noise," replied William crossly; "the'rt younger than most of us and ought to know; don't make a show o' yer ignorance." "Now, sir," said Thomas, "please tell us what the name of the weed be." "Spotted Persicaria," I enlightened them. "its botanical name. Polygonum Persicaria, so William had an idea of its name when he pronounced it as Polly's-got-'em or Percy-carry-'er. It is a member of the dock family, and doubtless is a great robber of cultivated land." I was thanked, but I believe that henceforth this pernicious weed will be known hereabout as Polly's-got-'em. As for the orchis maculata or Spotted Hand-orchis, I feel pretty sure its future name will be Methuselah. "Any good to the bees, sir?" said Charles. I thought not. Then one or two more waxed eloquent. I was asked why bees were so fond of charlock. "Why," said Bob, who had hitherto been silent. "Gaffer sent I into lower waking field last spring to go and hoe up the charlock. I was feart to go on; field instead of being yeller were black wi' bees." I believed him, for no source of nectar was so prolific last year as the charlock; from thence came my best honey, and my great regret was that the great drought prevented the autumn flowering of the weed on the fallows. "What flowers do your bees go for most during a good season?" asked one of them. "'Tis a fair spot for flowers, and my missis says she's going to start with bees this spring coming." I related the chief sources. "Blackthorn, elm, ash, and fruit blossom, winter beans, charlock, may, spring beans, white clover, limes, rest harrow, and knapsweed, purple clover, autumn charlock, and ivy. The hollies and boxes with the laurels help out, so does the borage and many wayside flowers." "You don't say," came his response. "Then how much honey in an acre of beans, should you say?" After correcting him by explaining it was nectar in the flowers and not honey until it had passed through the body of the bee, I stated the quantity to be not less than 4 lbs. per day for a week. "That means," he went on, "twenty acres of beans ought to give 40 stone in a week." I agreed. "Dang it," said he, "what's an acre of white clover good for in a good season?"

"Twice as much," I told him. "There yer be," shouted William. "What did I tell thee? Didn't I say as there was more honey wasted in this parish that ever parson got into his 'ives; now perhaps ye won't be so skepful another time." "Sceptical" I corrected. "Well, whatever it be, mates, you've only got to use yer brains, supposing you have some between yer palate and yer skull; think what there were last year. Hedges smothered with blackthorn and may blossom and blackberry flowers: then there was 120 acres o' winter and 40 o' spring beans, 30 acres o' white clover and 80 o' purple, and charlock no end, and you waste on the hill all rest harrow, and there's you young chaps none o' you 'as the pluck to keep a few bees, and you sees the honey—beg yer pardon, master—nectar a wasting afore yer eyes. Why if parson must get the lot he'll want more bees than 'e can do with, and mind you, I ain't taking no count o' the nectar wasting in parishes round which bees would fetch if 'twern't too far, they reckons nought o' parish boundaries." William warmed up and would have kept on, but the whistle blew and the engine started, and the men went to their respective duties. The drone of the drum gave William a parting inspiration. "They 'as to feed that faster than you 'aves to feed bees, don't they master? Plenty of candy's the stuff for February—beer and sugar and plenty of candy." We perhaps don't agree with the beer and sugar, but I hope our bees are all well supplied with candy.—E. F. HEMMING, Steeple Gidding.

Jottings from Ashdown Forest.

Now (January 20) we have got over a short spell of real winter frost, wind, a good coat of snow now thawed and gone. Some hives have to-day undergone a brief inspection, and all must have one very shortly. Most have a lively appearance, though, as usual, there is a great diminution in the numbers. Numerous tits have played havoc with many colonies, apparently they must be thinned, or in many hives there will soon be no bees left. Most stocks have still some sealed stores to be seen, but it is wisest to supply candy or loaf sugar; loaf sugar with me serves well in cases where a rack of sections has been left on. I break the tops off a couple of sections over the cluster, fill the space with loaf sugar, and dribble a little water on it. I prefer to use a three half-pint bottle nearly filled with, preferably, warm water, into which a teaspoonful of Sanitas fluid has been added. The bees like it, it can do no harm, and may be beneficial to the bees. Skeps or hives that have no sections on I twist some hay (or generally there is long dry grass handy) into a band, about like the outside of a blackbird's nest, place it over a hole over the cluster, fill it with loaf sugar, damp it, cover up snug and draughtproof, the sugar being added to and re damped according to requirement. Once a week is often enough if they have sealed store; if no sealed store it must be damped more frequently. There is no fear of getting sugar stored to come out in the honey, and when the bees no longer require it it is found sucked dry as cinders. The remaining sugar is easily collected and stored for future use.

Some hives I find are very messy and damp from condensation, with many dead bees on the floor. Those hives that can be are tilted up, and the condition of floor is easily seen. If singlehanded, a bit of brick props it up while the floor is scraped with a bit of lath or anything handy.

It seems almost everywhere it will be beneficial and wise, if not a real necessity, to commence by transferring the stocks into renovated hives, set up nicely, starting on the most promising. After renovating the hive see to the next, and so on right through discarding any frames with useless combs. Any hives in which the bees have succumbed would be well renovated to start on, as soon as weather permits. If no disease the good combs are useful to work in.

Sections it seems are wanted, but what a job it is to get them. What a lot there still are that have been tried year after year. They are hopeless to try again without cleaning out the stale foundation: many will smash getting them out of the racks, and new ones are costly. What a lot of patience is needed, as if one scraps the old and puts in new many of the little "cusses" will swarm and not work them. I prefer only a small V bit of good quality brood foundation; the bees can make a good comb if only they will.

From the advertising columns it seems seldom there is much section honey on offer of late years, though there seems a lot of run honey, chiefly in bulk. Probably others like myself find screw-top bottles make the honey come too dear to sell readily retail; the card jars for honey probably never will "take." Tin should be the thing, but most people would "fancy" the honey was tinny, yet they would not think of buying golden syrup in anything else but tin.

The importation of honey is what home bee-keepers are up against, if they are producing to sell. We can get the top quality, but doubtless will have to offer it much cheaper. Those who produce for their own consumption and for a few friends are not affected by imported honey no matter how cheap it is.

Legislation re Bees.—We don't seem to get very much "forrarder." Myself I doubt if we will get anything much good. I have had some experience when I rather wished there was some law, but unfortunately hardly any of us are agreed as to what we do want. The legislature naturally would want to know what the benefits would be to the nation at large: would bees fertilise fruit to be abundant even in years of frosty spring; would honey be abundant and cheaper for the people than it is now by importation; who would bear the cost of working the legislation? As bee-keepers we would rather resent the interference of officials who we

thought had got a more profitable job than keeping bees. We would resent having to take measures no half-dozen experienced bee-keepers would be agreed on. We would want to know what compensation we were to get, and where it came from. Wild bees would be a great trouble; the non-bee-keeper would not relish being responsible for wild bees in some awkward place. It would need some branding to prove who the owner was, and make him responsible. I fear we will for a long time have to take our chance.

Foreign Bees.—English people in England to get English honey. On the face of it it is rather funny we should need foreign queens. Could not we send honey to foreigners as produced by English bees, and sell them some stocks of bees or queens to replace what they already have? I rather fancy I have seen sections of such quality from English bees as I have never seen produced by imported bees. As for temper of bees, I have had experience with the descendants of some that somebody imported. Only last summer one most vile lot I had to see to *re* extracting shallows (they would not work sections) the process of which the owner, his daughters and friends were most interested in, *i.e.*, the extracting. The gardener afterwards told me he heard what I said to the bees, and what I called 'em. Well, I think had the others been there (hid in a laurel hedge) they would most likely have also heard.

A. J. RIDLEY.

Horney Common, Uckfield, Sussex.
January 20, 1922.

Jottings.

Page 23.—I intended "brace" to read "trace."

The New Season.—I saw my first crocus in bloom to-day, January 29, and all being well we shall be able very shortly to examine stocks and mark for feeding. I have a particularly lively lot of Italians here, which were finding pollen on January 9, presumably from the hazels. They are on the wing at every opportunity in regular spring speed; a newly-imported queen, not much doubt about the climate suiting, at present.

Hive-making (Page 31).—One does not like to offer criticism on such advice to beginners as the Rev. Hemming measures out in such an interesting manner from time to time, but from a practical carpentry point of view it is quite out of place to recommend the stopping of grooves at the bottom; there is no object in retaining these at 12 ins. on the one hand. Why not saw them off? Standard chambers only need to be 9 ins. high; anything above, although protecting the frames during manipulation, is a complete nuisance, and handicap to the old hand, when removing surplus, even more so to the novice. This kind of material is no cheaper than ordinary standard, 9 x ⅞, which can be bought prepared, and the putty or lead required in the former case, besides being quite an item in expense and labour, would not last a single season in situation. As a vermin preventive, a thin strip of wood might be used if this method is adopted, but it is far easier to take away the groove. Again, half way up, one has an extra, useless joint; this must be well painted and fitted—no easy task for the novice, perhaps, with few tools and no knowledge of sharpening them. No explanation, so far as I can see, is given as to the method of holding these together, otherwise, we should have an ill-fitting, double six chamber, instead of the single twelve attempted. I should strongly advise the new hand to stick to the 9-in. board if using standard sizes. A cheaper and quite serviceable hive can be made on these lines by following the advice offered in the "Bee-keepers' Note Book," from the Journal office. I suggest the alteration of making the lifts without external fillets by making their inner sides of the dimensions of the outer, but below, called telescopic fashion; a small fillet is tacked or screwed about ½ in. up, inside, to hold in position. This method is more weather-proof and much more durable, while if porches are made adjustable or discarded, and the lift is made of timber, 11 ins. wide, this chamber can be inverted in winter, blocked up in front, and will provide a far greater amount of protection.—A. H. HAMSHAR.

["The Bee-keepers' Practical Note Book" is now out of print.—EDS.]

North Cheshire Chat.

Soil and the Colour of Honey.—It has occurred to me that soil has a great deal to do with the colour of honey. Has any reader ever made any observations on this point? Evidently there must be something in soil or locality to account for the great difference in shade of white clover honey, for instance. One sees pure white clover honey from some districts water-white, in others the colour of amber. Of course, in smoky districts one would expect some discoloration, but in open country districts this would not obtain. I have an idea that the lightest honey is taken in limestone districts, but have no definite information. Would any reader who obtains colourless honey let us know what the soil of his district is?

Mr. Jno. Berry's take from one hive must be the record. Would he give us a few more particulars, viz., type of hive used, and age of queen, and the source of the honey extracted on May 25?

I am wondering at the Rev. G. H. Hewison's article on "Acari in Young Bees." When Dr. Rennie discovered the mite which caused "Isle of Wight" disease it was named *Tarsonemus woodi*. Now we have *Acarapis woodi*, *Tarsonemus apis* (Tarsonapis) thrown at us. Are they one and the same individual under different cognomens, or do they refer to different species? Would Mr. Hewison or our Editors kindly explain. Also please what is *Aleurobites farinæ*? An ignoramus would like to know.—D. J. HEMMING, Appleton, Warrington, February 7, 1922.

An Association Extraordinary.

"A little nonsense now and then
Is relished by the best of men."

I have not been **ABELL** to **STEEL** time enough in the busy season for sCRIBBling, and, **OWEN** to **PRIOR** engagements last month, even this had to **WAITE** over. I **TRUSS**t, however, you will see the drift of the following if you **REID** through the **PAGE**s of the **B. B. KAY** Association's list of members, in the last annual report, without **BURDON**ing yourself with a lot of **REED**ing.

Now, **YOUNG BURTT CLARIDGE,** when he returned from **FRANCE,** looking as **BROWN** as a **BERRY,** made a **BOLD** start, and went in for bee-keeping, and, together with his **COUSINS,** the **GREVILLE-SMITH**s, decided to **POOL** gains and losses; certainly a **BRIGHT** and **BRAIN**y idea. They hoped to get **OVER**(a)**TON** of honey, but that would require a **CARTER PATTERSON** van to take it home in. They also thought they could get a lot out of bee-keeping without buying a sh**ILLINGWORTH** of appliances from "**ROBERT** (E.) **LEE,**" of Uxbridge. With an **ION** probable disease, some bees were got from **HOLLAND,** for which they paid a good **PRICE.** They were placed in a **CORNER** of the garden, close to a **BOWER** of **BRIERS,** and near to a **GRAVIL** path. You went through a **WHITE GAYTON** to this path, and then under an archway, where Rambler roses **TRAILL**'d. The bees, being in an old skep (the **BELL**-shaped sort), they mixed **SANDWITH CLAY,** and **STUCKE** it round the bottom to keep out cold and wet, and reckoned to put them in the **SILLAR** (*à la* Americans) for the winter. As time went on they swarmed, up in a high tree, in the grounds of the **DUKE** of **BRYDEN,** and an old bee-keeper, by the name of **STEVEN SAUNDERS** (a man with a **FROW**zy look about him), was asked to get them down, and, when taking them, he **FELL** from the top **RUNGE** of the ladder and hurt his **HEAD.** This **FALLE** happened because **STEVENSON,** whose name was **RAYMOND PATRICK,** and who should have held the ladder firmly, played such a **POURPART** in attending to his job. It was reported a week ago that he had nearly recovered, and could use his limbs **FREER** now. People who passed by got interested, and one, named **MORRIS,** said, "Well, **WATSON** here, then?" The old man concluded he had got all the bees in, as he could not **SEYMOUR** bees flying about. He next put out a decoy, hoping to catch some swarms of other bee-keepers. He thought this was a **SMART** bit of work, but it was a **LOW**-down move, much **LOWE**r than it should be, for it **SIMMS** not to be "playing the game" fairly, and, **WATTS MOORE,** is not considered a very **MANLEY** action. Now, there was a lady bee-keeper named **LILLY, MAUD, MACK'ANDREWS,** a woman very **BIGG, WITHER** very red face, and a **WHITE-HEAD** of hair (she had been told she could **DYER** hair a **GOOD, RICH, BROWN** colour). She kept the **BATT** and **BALL** Inn at **EMERTON.** (Just **BY,ATT** a cross-road, stood a **FISHER**man's hut). This place **LEIGH**s (this is always pronounced lye) between **HAYWARDS HEATH** and **BURGESS HILL,** not so very far from **ROWLANDS CASSELL,** which is in the County of **HAMSHAR.** She heard of this, and as she had lost a swarm, she **AND-ER-SON, CUTHBERT,** a **SLIMMAND** gentlemanly young fellow, all **SMILES,** hurried over; in fact, the mother **AN-SON** went so fast that she got a **STICH** in her side, though she was considered a good **WALKER. CUTHBERT** had put on his **KIDD** gloves that day, but he should, of course, have put on his **BIRKETT** gloves. As was their **WRIGHT,** they claimed the swarm, which nearly filled a **PECK** measure, for the brothers **HERROD-HEMPSALL** had told them they could do so. **OTHEN** what a **WIGG**ing she gave him, and a **HINTON** how to act in future. The lady's husband, who was an **ALDER**man, with, of course, a **SEATON** the Council, would have accompanied her, but he had gone on a visit to his old friend, the **MAYER** of **TAUNTON,** and was expected home late that **KNIGHT** (though she hoped not **TEW** late), and on his way home through town, was to call at **MARSHALL** and **SNELGROVE**'s, the West-End **DRAPER**s, to order a costume to be made for her, of the **STEWART-FARQUHARSON** tartan plaid. The swarm had gone **MILES** from their apiary, through **MOSS**y **DELL, VALI** and **GLEN,** on through **MEADOWS** (as well as **LITTLE-DALE**), over a **GREEN PARK,** across **RIVERS** and **BROOKS,** and close by a **WOOD,** before it settled.

I **JUDGE** there was a good bit of honey in the skep when **GARNER**'d in (I mean taken up), though there was but one rack of sections on (which is sometimes miscalled a **CRATE**). Not being very near any **HEATH**er crop, they decided to make **MEADE** of what there was in the skep, though at one time they had thought of sending some of the honey to **KING GEORGE.**

As the **KETTLE** was near boiling (and you must have the **KETTLEWELL** boiling to make good tea), they were invited to have a meal, and were set down to

PYKE and **SALMON, BACON** and **LAMB,**
And various pots of **CHIVERS'** jam,
Washed down with port from **SANDE-MAN.**

When they had **EATON,** they said they were **FULLER** than when they sat down, and it must be admitted that the **BLISS**ful sp**READ** was no **ORD**inary affair, and was done in a very **FLASHMAN**ner. When once within the **SANCTUARY** of their own home, they congratulated each other on obtaining possession of the runaways.

This account has not yet appeared in "**PEARSON**'s Weekly."

I now wonder if the immortal **PEPYS** would not have done the above better justice than—

A. G. GAMBRILL,
of Richmond, Surrey.

North Hampshire Notes.

The following extract from *The Cottager's Monthly Visitor* for February, 1840, may possibly be interesting.—W. B. CORBETT.

BEES' WAX.

"From inquiries that I have personally made I learn that the quantity of wax of home-growth that finds its way to market is exceedingly small; nearly the whole supply of this commodity may therefore be said to be imported; the average yearly quantity is about 160 tons, but of this about half is re-exported. More than one-third of the whole comes from the Western Coast of Africa, chiefly from Mogadore. Cuba, Russia and the Barbary States send together about as much as Mogadore does; the remainder is brought in small quantities from the Netherlands, France and various other countries. It comes to us in the state of crude yellow wax, and requires to be purified and bleached before it is fit for the candy-maker. The impurities are separated chiefly by melting: those that are heavy sinking to the bottom of the boiler, and the light ones rising to the top, whence they are removed by skimming. The bleaching is performed by exposing the wax in thin ribands or shavings, to the sun and the dew, and it is brought into the form of ribands by pouring the melted wax in a thin stream on a cylinder revolving in water. Refined wax is liable to become brown, if melted by a naked fire; a steam heat is, therefore, very generally used for this purpose."

Report of the Society of Arts, etc., for 1838.

"*Obs.*—Would it not be worthy the attention of agricultural and other societies interested in *cottage economy* to encourage the production of bees' wax, instead of allowing it, like eggs, to be imported from abroad? Where prizes are given for bee-keeping, wax, *in a proper state for the market*, might be included among the objects for competition."—From the *Labourer's Friend Magazine.*

Shows and Showing.

Re Editorial.—The Editorial in "B.B.J.," February 2, under the above heading, is most helpful, and let us hope it will catch the eye of the "bottle tippers," many of whom are bee-keepers, and should benefit by reading it.

At our local show last August we started off well! Having arranged the exhibits, two of us were putting the finishing touches on, when two show officials walked up to the light-class exhibits, and the knowing one picked up the first bottle and turned it upside down.

This wound me up, so I went round and protested as mildly as possible, but effectively. What a mess we should have had for the judge to handle if this had been allowed to go on!

Questioning.—I appear to have applied a meaning other than was intended to this word, and must thank you, Mr. Editor, for pointing this out, and I am sure Mr. Price will forgive me if I have caused him any uneasiness on this account. Webster gives many meanings to this word, also the following apt quotation:—"He that questioneth much shall learn much." (Bacon.)

Bee Shows to come.—Exhibitions are invaluable as a method of educating the public to the value of honey as food, and together with many other readers who take an active part in the show business, some hints on the general conduct of shows, methods of advertising, etc., would be most helpful to us.

Judging.—This is a duty not lightly to be undertaken, and calls for qualities in the judge that many people fail to realise. Knowing it is impossible to please all, his sole object is to arrive at a just conclusion in making each award, and if "after the event" he finds his decisions to have given general satisfaction, as was the case at Lichfield, then he is entitled to congratulate himself.

Some bee-keepers claim that a judge should not be expected to give a decision—single-handed—on more than 80 exhibits; an expression of opinion on this point would be helpful.

In Appreciation.—In closing these notes I should like to put on record one or two noteworthy facts in connection with local show matters, and the valuable assistance rendered by our County Expert.

Like many other show committees we have no spare cash to play with, and knowing this he gave his services—freely—on both occasions, and this, together with the satisfaction his decisions created, helped in no small measure to put us on our feet.

A satisfied exhibitor comes again, and the best policy a show committee can adopt when they have found a good judge is to "stick to him."—E. JACQUES, Lichfield.

Sheffield and District Bee-Keepers' Association.

ANNUAL GENERAL MEETING.

The ninth annual general meeting of this Association was held on Thursday, February 2, 1922, at the Tontine Cafe, Sheffield. Mr C. M. Hansell occupied the chair.

The hon. secretary, Mr. W. Garwell, presented the report and balance-sheet for the past year. The report showed a very satisfactory increase in the membership, also five special lectures have been given during the year, in addition to the ordinary monthly meetings. The balance sheet also showed a very creditable balance in hand.

The Chairman, in moving the adoption of the report and balance-sheet, said that he considered it very satisfactory, seeing that the Association still continued to increase its membership, and also to keep adding a little to the balance in hand, which showed that the Association was progressing. Mr. C. Haynes seconded the motion, and it was unanimously adopted.

J. H. Richardson, Esq., was unanimously elected as president, in the place of Mr. W. T. Garnett (deceased).

The following vice-presidents were elected :—J. D. Outram, Esq., Eric J. Outram, Esq., J. F. Outram, Esq., C. M. Hansell, Esq., Frank Scott, Esq., Wm. Bashforth, Esq.

Messrs. Wm. Bashforth, F.C.R., and C. M. Hansell were re-elected auditors; Mr. P. Ridge, librarian; and Mr. W. Garwell was re-elected hon. secretary and treasurer.

The following committee were elected :—Messrs. S. Livsey, J. Palmer, P. Ridge, C. Haynes, A. Johnson, Irwin Packington, J. P. Williams and Miss Musson.

The newly-elected president then presented the preliminary examination certificates to Messrs. C. M. Hansell, P. Ridge and A. Bashforth, commenting on the fact that Mr. P. Ridge had also passed the intermediate examination and Mr. W. Garwell the final, which he thought was very creditable.

The proceedings terminated with a discussion on the best means of making the Association beneficial and helpful to its members.—(*Communicated.*)

Middlesex Bee-Keepers' Association.

This old-established Association is opening a model apiary at Barnet for experimental and educational purposes.

It is proposed to hold classes in practical bee-keeping during the coming season at the very nominal fee of 7s. 6d. per course of six lessons for members. Demonstrations will also be held at which all bee-keepers will be welcomed.

A few choice three-frame nuclei may now be booked at £2 each.

Inquiries to the Hon. Secretary, M.B.K.A., 23, Bedford Street, Strand, W.C.2.

CORRESPONDENCE.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real name and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

Labelling Honey.

[10631] May I, through the medium of your valuable journal, make a protest in the hope that bee-keepers generally will take it up, against the action of the Government in allowing foreign honey to be imported and sold on our market without a label showing the country in which it is produced.

This summer, when on my holiday in a large and very popular seaside town, I canvassed many of the large grocers' and dairy shops for orders. Only in one shop did I see English honey displayed, and the proprietor told me that the sale was negligible, due to foreign competition. In the other shops, all (all mind, without exception) told me that customers asked for honey, and when asked which they preferred, this jar at 1s. 6d., or this jar at 2s. 3d. per lb., chose that at 1s. 6d., and it therefore did not pay to handle English produce, and only this week I have had a letter from a large firm stating that they cannot handle at 20s. per dozen screw-cap jars, each labelled "Pure English."

Now, I personally, and I think bee-keepers generally, are agreed that English honey can hold its own on its merits if given a sporting chance, and to me it seems that the best way is to let the consumer, whose palate is not yet educated sufficiently to distinguish between home and foreign produce, know from the label on the jar that the honey he is purchasing is not the home-produced article, and that the production did not give employment to British hands, many of whom are ex-service men, financed with British capital.—E. H. TUNMER.

Shows and Showing.

[10632] I am keenly interested in the Editors' notes on above, also friend E. Jacques Lichfield's "Lines." I think all show committees should have a supply of "Please do not touch the exhibits" cards; I know of some keen exhibitors that make a practice of sampling all prize exhibits, and are not particular about expressing their views before others. Can one wonder at many being dissatisfied? Unless it is something special I never touch an exhibit for the following reason, I feel certain I may be asked what I think of a certain exhibit, I reply, "I do not know, I have not sampled it." By this I keep my hands clean from any dispute. There are a few judges to-day that always use the test by inverting the jars upside down. No, sir, it is no test.

I think commercial wax should be in all shows, but to make it a success it should be a good prize or there would not be many entries on account of the labour. Wax in any form should be as plain as possible.

I know one good judge that does not strictly carry out the over-laced section question. Last year at Stafford, one exhibitor told me, had he known I was going to pass over his sections for over-lacing, he should have cut part of the paper off, by so doing he would have lost points in the "get up." There is no excuse for over-lacing better keep on the narrow side. I think I have heard of the case referred to by friend Jacques before.—J. PEARMAN.

Trade Catalogues Received.

Messrs. E. H. Taylor, Ltd., Welwyn, Herts.—This 43-page catalogue is got up in an attractive form, with an artistic cover. Every article needed by a bee-keeper is listed, and most of them illustrated. There is a wide choice of patterns in hives for all purposes. Messrs. E. H. Taylor, Ltd., claim their works to be the largest in Europe.

They were enlarged during the past year: also new machinery installed, and material and workmanship may be relied upon.

C. T. Overton & Sons, Lowfield Apiaries, Crawley, Sussex.—Another well got-up catalogue of 30 pages. Messrs. Overton are the makers of the hive designed by Rev. Tickner Edwardes. There is also a good choice of other hives, both ordinary and observatory.

Bee Shows to Come.

May 24-27 at Guildford.—Surrey B.K.A. Show. Two Challenge Trophies, Apis Club Silver Medal, B.B.K.A. Silver and Bronze Medals and Certificate, Surrey B.K.A. Silver and Bronze Medals, Open Classes Honey, Wax, Appliances, etc., Demonstrations, Lectures, etc.—Hon. Secretary, W. E. Hamlin, 45, Norbury Court Road, Norbury, S.W.16.

Special Prepaid Advertisements.

One Penny per Word.

Will advertisers please read these Rules carefully in order to save trouble, as they will be strictly adhered to.

Trade *advertisements of Bees, Honey, Queens, and Bee goods are not permissible at above rate, but will be inserted at* **1½d.** *per word as* **"Business"** *Announcements,* immediately under the *Private Advertisements. Advertisements of Hive-manufacturers can only be inserted at a minimum charge of* 6s. *per* ½*in., or* 12s. *per inch.*

PRIVATE ADVERTISEMENTS are only intended for readers having **Surplus Stock** *to dispose of.* **Driven Bees, Nuclei,** *and* **Queens that are reared or imported for sale,** *are Trade Advertisements, and can only be accepted under trade terms. A charge of 6d. extra per insertion will be made if a box number is used.*

Advertisements must reach us NOT LATER than FIRST POST on MONDAY MORNING for insertion in the "Journal" the same week.

Orders for three or more consecutive insertions in "The Bee Journal" entitle advertisers to one insertion in "The Bee-Keepers' Record" free of charge.

PRIVATE ADVERTISEMENTS.

SIX strong 10-frame Stocks Italian and Italian Hybrids, healthy, April-May, 75s., carriage paid; box 10s. extra, returnable.—BIRD, 40, Frederick Road, Cheam. b.55

TO MY OLD CUSTOMERS AND NEW ONES!—700 1-lb. parchment pots (stamped) of granulated guaranteed pure Lincolnshire Honey, 1s. 6d. per pot, carriage paid; sample.—WOODRUFF WHITE, Penny Hill, Holbeach, Lincs. b.55

GOOD Light English Honey, granulated, £7 cwt. on rail, tins free, deposit system; sample 4d.—SACK, Barley, Royston, Herts. r.b.25

20 STRONG STOCKS, Italian Hybrids, good working strain; free from disease; satisfaction guaranteed; April-May, 90s., carriage paid; Hive, 20s.; box 10s. extra, returnable.—REV. COOPER, 62, Park Hill, Carshalton. r.b.28

BEAUTIFUL LINC. HONEY, granulated, 1s. per lb. in 10- and 12-lb. tins; carriage paid on 50 lbs.; sample 4d.—CURTIS, Fenland Apiary, Holbeach. b.60

SEVEN unbound volumes BEE JOURNAL, 1915-1921. What offers?—BEESON, Southwell, Notts. b.30

FINEST KENTISH HONEY, 28-lb. tin, 36s.; £7 per cwt., f.o.r.—RIVERS, Downs Road, near Southfleet, Kent. b.41

BEE-KEEPER, experienced all branches, good carpenter, wants situation.—Box 55, BRITISH BEE JOURNAL Office, 23, Bedford Street, Strand, London. r.b.46

SWARMS booked for coming season, May and June, 25s. Cash with order. 5 cwt. first-grade Honey for Sale, the lot or divide.—HALFORD, West Wratting, Cambs. r.b.47

GARDENER-BEE-KEEPER requires situation, experienced inside and outside work; speciality, fruit culture.—WM. HODGINS, Gelli, Crynant, Neath, Glam. r.b.51

FINEST SUSSEX HONEY, £8 per cwt., tins free, carriage paid.—W. ROBERTS, The Thorne Apiaries, Ninfield, Battle, Sussex. b.7

CHANNEL ISLANDS.—Small Model Apiary for Sale, capable of extensive enlargement; no disease; no rival apiarists; good local honey sale; opening for poultry farming in conjunction.—Box 51, B.B.J. Office, 23, Bedford Street, Strand, W.C.2. b.11

12 STOCKS ITALIAN BEES on 8 frames, 70s each, delivery April; guaranteed healthy.—ENNEVER, 2, Oak Avenue, Enfield. a.52

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FOR SALE, six Simmins' Double Conqueror Hives, with section racks and supers, in very good condition, £5 each.—E. R. & A. DEBENHAM, Bladen Dairy Farms, Briantspuddle, Dorchester. r.b.15

CAN OFFER strong surplus Stocks of Bees (Hybrids) on 6 standard frames, wired combs, 1921 Queens, good working strain, mid April delivery, 55s., carriage paid.—WM. CHANNELL, Grove Apiary, Histon, Cambs. a.70

COMPLETE MODERN APIARY FOR SALE, consisting of 40 strong Italian Stocks (1921 Queens), in nearly new 13-frame Hives, zinc-covered roofs, each hive fitted with excluder and two supers; 4-frame Extractor, Ripener, Feeders, etc.; carriage paid in Great Britain; April delivery; £500, or near offer.—Box 48, B.B.J. Office, 23, Bedford Street, Strand, W.C.2. w.11

BUSINESS ADVERTISEMENTS.

1½d. per word.

I HAVE a limited few Nuclei or Stocks to spare. A unique opportunity for those who desire the best in Bees, none better, the result of years' selection and research; price from £2; May onwards.—TROWSE, Eade Road, Norwich. b.54

STRICTLY BUSINESS.—One dozen Flavine—S Powders, 1s.; a Japanned Sprayer, post free, 6s.; a Floorboard Feeder, to fit under any hive, 10s., post paid.—S. H. SMITH, 30, Maid's Causeway, Cambridge. b.63

FAMOUS COTSWOLD BEES.

COLONIES from 70/- **NUCLEI from 45/-** **SWARMS from 37/6**

Write for Unique Art Booklet. 20 pages Valuable Information. Remember—Buy from the Actual Breeder.

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BEE DISEASES.—Bees microscopically examined and reported on. Send about one dozen, together with P.O. for 1s. to cover expenses. Lantern Slides for lectures supplied. Acari Slides, 2s. each; Anatomical and General Slides, 1s. 6d. each; postage extra. Prints on approval on receipt of stamped, addressed envelope.—REV. G. H. HEWISON, F.R.M.S., Marr Vicarage, Doncaster. b.60

CARNIOLANS, British-bred in isolated apiary; one quality only, the best; Queens, 10s.; Nuclei from 45s.—SWAFFIELD, Libertus Villas, Cheltenham. r.b.61

SKEPS, SKEPS, SKEPS.—The best and cheapest ever made, 14 in., 10 deep. Special Skeps made to order. Can supply any number. Wholesale and retail. Write for Price List.—H. SEAMARK, Straw Skep Manufacturer, Willingham, Cambs. b.62

STIMULATE YOUR BEES! — Incomparable Candy, 7 lbs., 8s.; 10 lbs., 11s.—BOWEN, Queen Breeder, Cheltenham. b.57

STRONG 4-frame Italian Nuclei, £2, carriage paid, June delivery.—E. W. D. MADOC, Mattishall, Dereham. b.59

THE ACARINE 1921 ECLIPSE PAD.—It knocks out mites and moths. Your money back if not satisfactory. Price 5s., post paid.—S. H. SMITH, 30, Maid's Causeway, Cambridge. b.64

WE APPRECIATE THE MANY CONGRATULATIONS received on our enterprise in originating the giving of an absolute guarantee against Acarine disease. Our offer still holds good for all Stocks and Nuclei booked by April 5. A sporting proposition with no irritating conditions. Our Italians are the best little Bees we know, and we have failed to obtain evidence that better exist.—THE WELSH BEE GARDENS, Brecon (Lt.-Colonel Weaver Price). We Buy Beeswax. State price. Quick payments. b.67

DUTCH BEES.—Send for my artistically Illustrated Catalogue outlining my method of managing bees profitably. Read my notes on Queens and Queen Rearing. Will interest the expert and amateur. Free for the asking.—WHYTE, Bee Farm, Cumbernauld Station, Dumbartonshire. r.b.32

ASSISTANT wanted, to assist in commercial apiary. State experience and wages expected. —Box No. 52, B.B.J. Office, 23, Bedford Street, Strand, W.C.2. b.33

BOOK NOW!—Choicest home-bred Carniolan Queens for 1922.—PEARSON & GALE, Marlborough. b.24

MY CHOICE GOLDEN ITALIANS, favourites amongst prominent apiarists, are again offered in rotation. Queens and Nuclei.—E. COOMBER, Breeder of Superior Golden Bees, 64, Ronald Park Avenue, Westcliff-on-Sea. b.40

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White Candy—4 lbs., 5/- post free; 10 lbs., 11/- post free. Glass top boxes (2 lb.), 4 lbs. 5/- post free.

E. H. TAYLOR, Ltd., BEEHIVE WORKS, WELWYN, HERTS.

TO ADVERTISE AMBROSIAN BEES we will distribute 20 only powerful 8-frame Stocks of our PREMIER ITALIANS in W.B.C. Hives, complete supers and foundation, delivery May, £4 10s. the complete outfit. One only to each order.—AMBROSIA APIARIES, S. Farnboro', Hants. b.65

ADMINSON'S SEMI-COMBS.—Nuclei on these combs from mid-May at cheapest rates.—PEARSON & GALE, Marlborough. r.b.66

COLONIAL HONEY FOR BEE-FEEDING.—Australian new white, 60-lb. tin 39s., two tins 77s.; finest West Indian, 56-lb. tin 41s. 6d., two tins 75s.; carriage paid Great Britain.—LONDON TRADING AGENCY, 32, St. Mary Axe, London, E.C.3. b.52

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Moderate advertising and the co-operation of progressive bee-keepers to keep down overhead expenses ensure reasonable prices.

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JAMES B. BALLANTYNE,
HAZELBANK, LANARK. b.58

OVERTON'S ILLUSTRATED CATALOGUE for 1922 now ready. Write for copy, post free. Overton's Medicated Candy, glass top boxes, 1 or 2 lb., 4 lbs., 5s.; 7 lbs., 8s. 3d.; 10 lbs., 12s., post free; plain top boxes, 1 or 2 lb., 4 lbs., 4s. 8d.; 7 lbs., 7s. 6d.; 10 lbs., 10s., post free.—C. T. OVERTON & SONS, Crawley, Sussex. b.69

BEES, noted disease-resisting strain. Limited number of Stocks April, May, Nuclei onwards; prices moderate; orders in rotation.—SMITH, 5, Florence Terrace, Ramsgate. r.b.35

BRITISH bred Italian Nuclei and Queens. Prices on application. — CHARMAN BROTHERS, West Hill Apiary, Brookwood. r.b.4

I HAVE a few hundred new Standard Brood Frames, 19s. 6d. 100; Wide Shallow Frames, 20s. 100; carriage paid; cash with order. Don't delay.—TUNMER, The Apiary, Maldon, Essex. r.b.19

DUTCH BEES, in skeps, £3 10s., carriage paid, March delivery.—COBB, 33, Bevan Road, Plumstead. r.a.73

JACK TICKELL.—For Queens, Stocks and Nuclei. List free. — Westbourne Apiary, Cheltenham. r.a.54

PUPILS WANTED. — Opportunity to learn commercial bee-keeping, honey production, and queen-rearing, out apiaries; 160 colonies maintained.—Terms and particulars from CLARIDGE, Copford Apiary, near Colchester. r.a.47

200 LBS. HONEY, 10 Stocks, from one Queen, Melton ex Simmins; proved honey producers. Queens, Stocks, Nuclei, Swarms. Book now.—MASON, Melton Apiary, Willerby, Hull. a.37

MAY SWARMS, £1 12s. 6d., packing, carriage free; 4-frame Nuclei (May), 42s., carriage paid; boxes 8s. extra, returnable.—H. WELCH, Wickham, Hants. r.b.22

NUCLEI.—Am now booking orders for my noted 4-frame Nuclei; Simmins', pure Italians, or Carniolans, 55s.; Hybrids, 45s.; carriage paid; 10s. deposit on returnable box. Book early and avoid disappointment. Delivery June-July.—HOWLETT, "Sylvabelle," Tring. r.a.31

QUEENS by return from April till October. PEARSON & GALE, Marlborough. w.14

NEW HARDY YELLOW VARIETY.—No loafers hottest days. Gathered honey 1921 after all others had retired from business.—Particulars, S. SIMMINS, Queenland, Heathfield, Sussex. r.a.15

THE WELSH BEE GARDENS, Ashgrove, Brecon (Proprietor, Lt.-Colonel Weaver Price).—Now booking Stocks and Nuclei. Highest grade Italians. r.a.15

HAVE YOU READ "THE BEE WORLD"? If not, why not? Every number in itself is a useful literary work for practice and reference. Specimen copy free.—Offices: THE APIS CLUB, Port Hill House, Benson, Oxon.

9D. PER 1 LB. CANDY.—4 lbs., 4s. 6d.; 10 lbs., 9s. 9d.; post free; larger orders 9d. f.o.r.—COBB, 33, Bevan Road, Plumstead. r.b.8

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Exporter of Carniolan Alpine Bees to all parts of the World. First and largest in Carniola.
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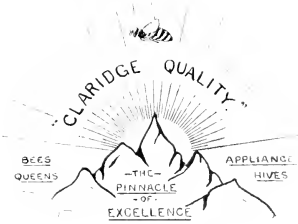

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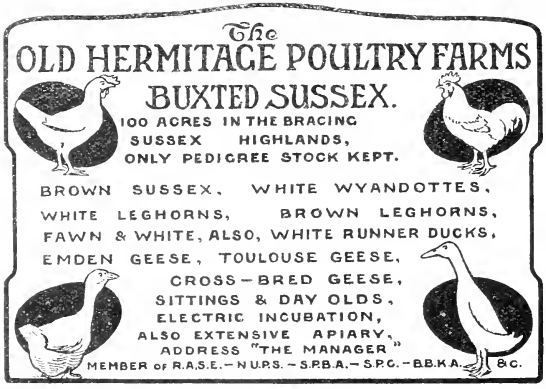

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The Bee-Keepers' Calendar.

FEBRUARY, 1922

23 Thursday.

"In seasons when I've thought
No spherey strains by me could e'er be caught;
. . . . . .
That the still murmur of the honey-bee
Would ever teach a rural song to me."

J. Keats, "To my Brother George."

24 Friday.

"Oh, pleasant Eventide!
Clouds on the western side
Grow grey and greyer, hiding the warm sun;
The bees and birds, their happy labours done,
Seek their close nests and bide."

Christina Rossetti, "Twilight Calm."

25 Saturday.

"Honey from silkworms who can gather,
Or silk from the yellow bee?"

P. B. Shelley, "Lines to a Critic."

26 Sunday.

"Let me not languish then, and spend
A life as barren to thy praise
As is the dust, to which that life doth tend,
But with delays.

All things are busy; only I
Neither bring honey with the bees,
Nor flowers to make that, nor the husbandry
To water these."

George Herbert, "Employment."

27 Monday.

"The lark has sung his carol in the sky;
The bees have hummed their noontide lullaby."

Rogers, "Human Life."

28 Tuesday.

"After them went Displeasure and Pleasaunce,
He looked lumpish and full sullein sad;
An angry Waspe th' one in a viall had,
Th' other in hers an hony-laden Bee."

Spenser, "The House of Love."

MARCH, 1922.

1 Wednesday.

"Joy's like a bee that gently sucks
Away on blossoms its sweet hour;
But Pleasure's like a greedy wasp,
That plums and cherries would devour."

W. H. Davies, "Joy and Pleasure."

Essay Competitions in the Bee-Keepers' Record.

The subject for our next competition which is being run monthly in THE BEE-KEEPERS' RECORD, will be "Observation Hives and their Management." Essays must be at our office by March 20, and must be accompanied by the coupon printed in the RECORD. Prizes of 20s., 10s. and 5s. are offered for the first, second and third prize essays. Any suggestions of subjects for essays will be welcomed.

A Dorset Yarn.

"Thus every good his native wilds impart,
Imprints the patriot passion on his heart."

Bee-keepers in rural England, with miles of fertile fields around them, with huge trees and hedgerows of blackberries, all giving nectar to the bees, have a better appreciation of their "native wilds" than those who live in urban and borough areas. This was brought home to me at the annual meeting of the Bournemouth area of bee-keepers, where all shades of political opinion, all grades of wealth, met to adopt the report of the past season's working, and map out another year of progressive work and pleasure in bee-keeping. Where we in rural areas have plenty of room for our stocks, in borough areas they are only in limited spaces.

One member whose residence is on the side of a steep hill has his hives on little terraces one above another, all close to his dwelling-house. Here "the patriot passion" is bees. The wealthy members have more room for their stocks, but even these crowd up the spaces with beautiful flowers and shrubs, and the bees are placed among them. When the hives of white paint and umber-coloured roofs look out among them it all seems part of a very pleasing whole; some among the fruit trees in the small culinary quarters. All shows the "patriot passion" of bee-craft. Here there is "every good" thing that is beautiful in nature—choice trees and flowering shrubs that can only live through the winter in the sunny south, where there is always something in blossom the winter through; shrubby veronicas always have their many coloured blossoms in bloom in winter, and when these are close to the hives bees can easily get what there is in each flower. It is very rarely that these are injured by frost and are very floriferous in winter, but to give up a space in limited quarters for bees proves that they are the "patriot passion."

After all, what gives greater pleasure to the owner than bees? What gives such great returns as bees? Your garden gives you luscious fruits and succulent vegetables, but bees collect you the richest natural sweet in the world. Luscious pears and richly scented home-grown melons, with their rich, melting flavour, are delightful: but tea with honey, home-made bread and fresh butter wants a lot of beating. Honey cakes and honey biscuits all add to the pleasures of the table. The wealthy bee-keepers in the south can have all these, and so can those who have limited spaces. Canteloupe melons are easily grown if you have a glass covering for them, pears will grow in most soils, honey can be collected from your flowers and other people's choicest grown specimens. The choicest fruits can easily be grown, but the richest natural sweet can only be harvested by bees; they alone will sip the nectar from flowers and store it for man to use some of the surplus. "Man's ruling passion" with us bee-keepers has many diverse ways of management. One who will leave ample stores of their own for spring feeding is most successful with his stocks. Another has already begun warm syrup as an inducement to early increase of population: he is also a most successful bee-keeper. His prizes at early shows are proof of this.

I have known it so with exhibitors of Muscat grapes—one with restricted root room, and the other with a free way for the roots to go anywhere; each did them well, each won first honours. These two bee-keepers, whose methods are so diverse, each get good results. We are always ready to try other methods, but we carry out those that serve us best. This may be somewhat conservative, but it is common sense. Our "ruling passion" is bees. We know that early breeding gives us strong stocks, with a larger surplus for early sales. Both those gentlemen live in borough areas: they both get early food from the same flowers, as Bournemouth is literally planted with early flowering almonds and plums with a dark coloured leaf, *Prunus Pissardii*, and so many escalonias, which give such a lot of bloom in the sunny south.

With evidence such as this it would not be wise to lay down a hard and fast rule as to methods; they must be governed by the individual stocks and the area in which one lives. Down south bees fly more in the winter: they must use more stores than those in colder counties: they must of necessity have plenty in the early months of the year. If they have not plenty, it must be given them; if they have plenty, they must be induced to use it by uncapping some stores, but there is always a risk of a week's sharp frost after scratching the cappings, and I have found the smell of fermenting stores when we have had a few days of warmth after a week's cold stores are apt to ferment, or give off the smell of fermentation, where a little warm syrup of best sugar would have the same stimulating action without the risk. We have tried each way; each system is successful, that is what we aim at—no matter which method so long as it gives us the goods.

The more bee-keepers one meets the greater pleasure one finds in the weight of surplus-

and the diverse ways of getting it. Some will spend as little as possible in production, using only boxes for brood nest, with narrow open ings in the top for a few section racks or smaller boxes to get surplus in the natural comb; but all proves that the "patriot passion" is bees.—J. J. KETTLE.

Jottings from Huntingdonshire

"Can you oblige, Sir, by coming over to see my husband; he be that bad and all a worry about his bees, and oblige yours truly, Mrs. ——."

This message, written in a large hand on the back of a postcard, arrived one day by first post. As there was no address given I was unable to divine who the writer was. As for the post-mark, it might have been a few hieroglyphic signs or some mysterious shorthand marks for all the help it was in endeavouring to locate the place of posting. However, as no one should know better than the postal authorities the meaning of their own symbols and signs I took the postcard to the post office, and asked them to tell me where it was posted. After waiting two days I was informed that it was posted at a village in the O— area, and since there appeared from the faint marks visible to be some nine letters in the name of the said place it was possibly S——. This proved to be right. As soon as an opportunity occurred I cycled over to S——, and calling on the Vicar and showing him the card he at once exclaimed, "O, yes, that's the writing of the wife of my old Sexton. Come along." We came to a cottage which was well set back from the road, the garden showing signs of diligent care; everything looked decent and in order. The interior of the house was in harmony with that without—neatness and cleanliness everywhere. The old Sexton was propped up on a couch near the fireplace, looking decidedly ill, but his face bore a look of gentility and refinement which is often so notable in those whose lives are spent in the service of God. Near the window was a chest of drawers, on the top of which, among many photographs, were two saucers containing the wheels of a couple of clocks. The window was filled with pots containing geranium, pelargonium and begonia plants. The woman spoke first. "We'm so glad you've come, Sir, Sam there 'ave been that a werriting about 'is bees 'e's iller than 'e ought to be. Our Alf be a coming home soon, so I suppose by this 'ere (she produced a telegram), and e'll be able to see to them, but I count this ain't 'is writing on this telegram, and it's worrying Sam that Alf should 'ave got somebody else to write for 'im." Here the Vicar explained that the writing on the telegram was that of the post-mistress, and, incidentally, asked where her sailor son had been to. "There now," she replied, "I almost forget, but 'e's been to Malta in the *Saturn*, or to Saturn in the *Malta*, anyhows it somewhere in them parts." Both the Vicar and myself finding it difficult to maintain our gravity, I thought it time to plunge into the subject of bees, and asked the old Sexton what he wished me to do. "Just look through the hives, Sir, please, and see if the bees wants any food; it's a nice, fine, warm day, and I don't want them to die. I can't sleep at nights for thinking of them, poor things, if they're short, and me not able to see to them, and nobody about here dare go near them; there's plenty of candy in the cupboard if it's wanted."

On being shown by the good wife where the hives stood I went at once to make a cursory examination, the Vicar rather nervously excusing himself, saying he had an important letter to write before post. As there was some three hours to post-time I smiled and thought the more. The old Sexton's hives were in excellent order, and the bees within strong, healthy and happy. Three of his four stocks were getting short of stores, and they were given candy, but the fourth so far as one could investigate on a February day had slabs of sealed honey which, by scratching some, I found to the quite liquid. "Thank you, Sir, thank you," said the old man, as I returned and reported how matters stood. "What you say is better than a dose of physic. How I loves my bees. I have been keeping them for over fifty years. My father was sexton before me; he died when I was twenty-two, and I got his place. The very first Sunday I was on my own a swarm of bees came and settled on one of the box trees in the churchyard. I plucked up courage and took them, and they did fair well that year; next year they were all for swarming, and I got five lots; one died in the winter, and the four lots left got me a suit of clothes with the money for honey sold that next year. Twenty years ago I started with hives instead of skeps, and managed well—selling swarms and honey. One year I lost all but one lot with some disease, but soon got my full strength again, and have done well with them ever since. This is the first time I've not been able through being bad to see to them, and I thank you again, Sir. In two months' time, Sir, if I'm spared, won't it be grand! The trees a shooting, the flowers a-blossoming, the finches and the thrushes singing, and the old rooks in the churchyard trees a-cawing, to sit amongst it all, and watch the bees a-going and a-coming and hear their hum—it's just beautiful. My bees, how I do love them, how I do love them."

Yes, bees, wonderful insects, you've interested and called forth the devotion of man for centuries, and still you enamour us with your ways. The method, the order and the sweetness of your lives touch a chord which once rightly attuned will never cease to vibrate. As my old friend said: "Those clock wheels in the saucers must all go back in the correct order, but the order of a well regulated clock is nothing to a well-regulated hive.—E. F. HEMMING, Steeple Gidding.

The Royal Show.

Mr. Holloway writes us that the honey section is a special effort on the part of the Cambs. B.K.A., not their own annual show as we stated.

Hive Contraction and Expansion.

By D. M. Macdonald.

In olden times the general rule in bee management was to run a swarm into a skep, very generally irrespective of the size of the skep or the number forming the swarm. Only when the bees bunched out, if the receptacle was too small, was an eke supplied. At every other time the bees got to work their own sweet will. Many apiarists of the present day work their frame hives on much the same principle. The hive comes home from the manufacturer provided with ten frames in position; sometimes with full sheets of foundation, at other times supplied with starters only. Then, when the swarm comes off, it is hived on all the ten frames, be it a 3lb., 4lb. or 5lb. cluster of bees, just as our forefathers disposed of the swarms run into their skeps. They then failed to observe, because they did not, or could not, look, that a very large percentage of their combs at the end of the season naturally consisted of drone cells. We can note, by observation, that this unnatural state of matters frequently results in our frames, especially when they are provided with starters only—a common but reprehensible practice.

Such a state of matters should not prevail under modern conditions. We should hive our swarms on varying numbers of frames, according to the number or weight of bees coming off from the parent stock. Perhaps it might be a pretty safe guide if I were to name five, seven and nine frames for the imagined weights given above—rather less than more. Indeed, I would almost advise that only the best and biggest swarms should at first be hived on the full complement of frames. Our object should be to secure quick finish of the combs supplied. To obtain this concentration of forces is important. Pack every comb under construction with a close body of builders. Keep up the internal heat of the hive to a high temperature and thereby spare as many builders and foragers as you can when the energy of every individual bee is at its best for either collecting nectar or turning it quickly from the liquid into the solid. It may be taken as a truism that ten days after hiving the swarm may be considered this ideal period. The best combs and the quickest built will be constructed in about that time if nectar is plentiful and weather favourable. Presuming that the beeman's year begins with October, when we have finished adding stores to all defectively supplied colonies, when winter packing has been carefully attended to, and all queenlessness has been repaired, many bee-keepers contract the full number of combs in their hives, leaving all second-class colonies on, say, eight combs. This contraction may prove a benefit in two ways: The internal heat is more concentrated, owing to the smaller area heated and the supplies of food are more within the reach of the winter cluster, while owing to the smaller comb surface being better covered the stores, on outer combs especially, will have less chance of deteriorating. If the theory is fully tenable the contraction of space caused by the two combs withdrawn temporarily will work for good and not evil. If this is true during winter proper it is bound to be more so in the early spring. Then the number of bees has been greatly lessened owing to winter deaths, while the many out foraging has a tendency to lower the temperature, perhaps unduly. Add to this that breeding is now being carried on actively and we have a fairly clamant call for lessening the cubic capacity of the hive interior. When the period of spring cleaning arrives, and more active breeding is common, it may be well to *compress* even strong colonies into a smaller space than the full capacity of the hive. All defective combs should be shifted behind the division board for a time.

At the earliest auspicious date, however, contraction should give place to expansion. If nectar is coming in fairly well, new frames, with full sheets of foundation, should take the place of those withdrawn. Any combs with honey should, however, take first place in being returned, and it is advisable to rake the face of the comb in order to cause the honey to "bleed." This form of spring feeding is the most stimulating. With very strong lots, when the temperature is high and forage available, "spreading the brood" may be tried on a small scale by experienced hands only. Novices should never resort to it in early spring. In April in the south, in early May in the centre of our island and in the late period of this month farther north, breeding makes rapid strides, unless in exceptional seasons, and we can safely return to the full complement of frames in all our best colonies, leaving weaklings alone for fuller treatment after some weeks.

From now on it should be all expansion. It becomes a question of whether we should leave the bees to work their own sweet will or keep them under our control. In the first case they will set their hearts on thoughts of swarming, and once the fever takes possession of their thoughts and intents nothing will clear it from their minds until it has run its course. First, second, third swarms come out in quick succession, and so our powerful colonies are demoralised. The forces are broken up into sections, and so we may bid good-bye to a full flow of nectar and a paying surplus take of honey. We cannot have increase and surplus too. Wise measures, timely taken, may keep the bees in one hive and thus make our honey harvest what we would desire it to be. During May, and, in the north, part of June, we should do all we can to secure increase and, coincident with the full flow, big battalions. At an early date, be early rather than late, supply every colony with surplus chambers and keep ahead of actual requirements in preference to lagging behind.

The chief aim should be to save swarming. There is what I may call a psychological moment, which if missed may mean failure. Saved, it may mean the tide which taken at the flood may lead to fortune in the shape of heavy surplus takes from every full colony. Make it your endeavour to keep the minds of the bees bent on storing and comb-building.

Labour is their god at that time. Don't let them loiter, don't let them idle, don't let their minds dwell on thoughts of treking. I know some races of bees, and even some strains of all races are difficult to control in certain seasons and under certain climatic conditions, but I feel, however, that if "The Spirit of the Hive" is wisely led the percentage of actual swarms should all over be only a small one.

(*To be continued.*)

Kent Bee-Keepers' Association.

We are sorry to hear there are dissensions in this Association, which if not handled with tact will become serious. In the "B.B.J." for December 16, 1920, the Rev. H. Newman wrote a letter containing a paragraph criticising the policy of the Kent B.K.A. He was then asked by an official of the Association to offer some "constructive criticism," and wrote a letter on the matter which appeared in the "B.B.J." for January 27, 1921. To that no reply was made, but in the "B.B.J." for April 28, 1921, Mr. G Bryden wrote a letter supporting the Rev. H. Newman, to which some of the officials appear to have taken exception. No official reply to the criticisms of either gentleman was made, but so far as we can learn the matter was discussed at various meetings of the Council of the Kent B.K.A., the final upshot of which was that Mr. Bryden was asked to resign his membership of the Association, failing which he was threatened with expulsion. Mr. Bryden declined to resign, and his name, we understand, has been removed from the list of members. Mr. Bryden then sent the following notice to members of the Northern Division of the Kent Association. Subsequent events will be best understood from the reports of two meetings as published in the *Chatham, Rochester and Gillingham News*. We make no comment on the proceedings at present, but the above note is necessary to make the matter clear :—

"46, Star Hill,
"Rochester, Kent.

"Dear Sir,—I beg to enclose for your consideration a copy of the letter written by me as it appeared in the BRITISH BEE JOURNAL on April 28, 1921, entitled 'Constructive Criticism.'

"This letter was taken up by the Council of the Kent Bee-keepers' Association (not the committee of the Northern Division of which I was secretary), and at a meeting of that body held on October 8, 1921, it was decided that I was antagonistic to the interests of this Association by that letter, and that they had no other alternative but to ask me to resign within seven days or that I would be expelled from the Association.

"The official organ (*Bee Craft*) of the Kent Association in November issue published a paragraph announcing that I was no longer a member of the Association, and that the secretarial duties would be taken over by the assistant secretary, without giving you the slightest idea or reason for my expulsion; and as I am continually receiving letters and personal calls from both members of the Council, the committee and others respecting my dismissal, I have, after due consideration, been advised to call a public meeting of all the bee-keepers of the Northern Division and others interested (see advertisements in local papers), so that I may have the opportunity of vindicating my criticisms and my personal reputation; also to show that I am and have been at your command, willing to help in every way possible which would further the interests of bee-keeping.

"A resolution will be put to the meeting after my explanation, and I sincerely hope that you will be able to be present and accord to me your true conviction of some of the services which I may have rendered to you and the Association during the whole of its existence. Should you be prevented from attending by a previous engagement I would welcome a postcard saying that you would support me as secretary of an independent Northern Divisional Association. I shall be pleased to state my policy (if time permits) for an independent Association, or I shall be quite willing to answer any questions respecting the same. One case in point will suffice for such a step being taken, viz., it has been impossible to get a single proposition put through the Council within the last year or more for anything which my committee thought would benefit this Division. Large sums were voted to officials, while we were refused to be supplied with a magic lantern, which would have been of the greatest service during the winter months for educational purposes.

"Yours sincerely,
"G. BRYDEN."

Report from the local paper :—

A BEE IN THEIR BONNET.

KENT BEE-KEEPERS' ASSOCIATION EXPEL THEIR ROCHESTER SECRETARY.

THE MAYOR AS PEACEMAKER.

For two hours on Saturday evening, at the Guildhall, Rochester, the members of the Northern Division of the Kent Bee-keepers' Association discussed the action of that body in expelling their Divisional Secretary, Mr. George Bryden, of Rochester, because of the latter's action in having early in 1921 written a letter to the BRITISH BEE JOURNAL criticising the doings of the Association. Mr. W. H Cook (vice-chairman of the Division) presided, supported by Mr. Bryden and the Mayor of Rochester (Councillor A. E. J. Price).

The Chairman, in opening the proceedings, said that very few societies managed to exist without some dissension at some time of their career, and that was what was happening in the Kent Bee-keepers' Association. About March of last year a letter, signed by a clerical gentleman named New-

man, appeared in the BRITISH BEE JOURNAL, and criticised the Kent Bee-keepers' Association. Constructive criticism was invited, and on April 28 a letter, signed by Mr. G. Bryden, the secretary of the Northern Division, appeared in that paper, in which Mr. Bryden gave some of his views. In his (the speaker's) views, Mr. Bryden had only asserted the right of free speech and a free Press, which were the rights of every Britisher, but the Council of the Association met at Rochester, and having heard what Mr. Bryden had to say, decided to request him to resign, and further, that in the event of his not doing so at the expiration of seven days, his name be erased from the membership of the Association! He (Mr. Cook) could not help thinking that the Council's treatment of Mr. Bryden was harsh and unfair.

A number of letters were then read from various ladies and gentlemen in different parts of the county interested in bee-keeping. All of these expressed sympathy with and confidence in Mr. Bryden. The Rev. J. Butler (Borstal), whilst regretting his inability to attend the meeting, said he had read Mr. Bryden's letter in the Journal, and had found nothing seditious or dangerous in it. The freedom of speech and the freedom of the Press were the rights of every Britisher. Other writers all agreed with Mr. Bryden's criticisms.

Mr. Bryden addressed the meeting at some length. He had been convened before a Council meeting ten days ago, but was not prepared to withdraw anything he had written. He had done nothing wrong; he had only upheld his principles. He was the tenth or eleventh person to join the Kent Bee-keepers' Association, and the Northern Division was formed largely through his energy. He had in mind the formation of a new Association, and thought they could get along with an annual subscription of half-a-crown. The funds accruing would be laid out for the improvement of bee-keeping. In this district they were badly in need of a depôt where their bee friends and customers could obtain appliances. They should also be able to get an expert for the new Association; he would be willing to act for the time being, although there were others very well qualified. He had acted as expert in Kent for three years, and had only once been refused admission to an apiary. He would like to see "Home Rule" in this district, for he thought they could work out their own salvation and carry on their domestic affairs as well as any other Association.

Mr. Bryden said he was in favour of eliminating all American methods. Some people had lived in America so long that they had become impregnated with these methods, and could talk of nothing else. They had listened to American lecturers in that very hall, and he had dared to criticise them there. American methods might be all right in that country, but could anyone tell him one man in this country who had been successful with American methods? He, however, could tell them of many who had failed. In England they did not have the climate, the conditions, or the opportunities of producing the stuff necessary for bees. All these lectures in which American and Colonial honey was boomed as the finest in the world was simply leading people into confusion. There was also the booming of big frames, which were impracticable in this country.

In criticising the inactivity of the Kent Bee-keepers' Association, Mr. Bryden said that had that body engaged an expert they could have made a profit of £100 or £150 per year. But they were isolated, and there had been no inter-county visits for the past two years. Members were constantly asking him, when they paid their five shillings annual subscription, "What do we get for this?" What did they get? Less for 5s. than they used to get for 1s. Further, could anybody present tell him if an annual general meeting had been held in 1921, or had anybody seen a balance-sheet for 1921?

Mr. Semper: Or for some years?

Mr. Bryden (continuing): New rules have been suggested. Have you any? I have. I have four sets for Kent, and every one is different! The rules also say that the divisional secretaries shall be ex-officio members of the Council. I have not had a convening notice for a year. Mr. Bryden further criticised the action of the Kent Education Committee in arranging its educational lectures always in places such as Rochester. He maintained that the original intention was to hold such meetings in outlying districts such as Meopham, Higham, Borstal, and Luton, in order to get recruits.

Dealing more particularly with bee literature, Mr. Bryden said that the Editor of *Bee Craft* was still inviting constructive criticism. He was surprised that some bee-keepers were not in the dock with him! (the speaker). The bee journals were filled with stuff culled from American journals. They were run on wrong lines. People did not want that. What would happen did a local editor fill his local paper with American news? No, he used local matter, and he (Mr. Bryden) contended that the duty of the bee journals was to teach Kent people bee-keeping.

[Mr. Bryden's speech was not reported correctly in the above paragraph. He was not referring to "bee journals" in general, but to Bee Craft, the organ of the Kent B.K.A.—EDS., *B.B.J.*]

The Chairman said that he was a conciliator, and he did not want to see another organisation. It would mean weakness. He hoped, however, that a unanimous resolution would go forward from that meeting asking the Council to reconsider its decision with regard to Mr. Bryden. He believed that this little affair would ultimately do good. The Council, at present, were too autocratic, and their action was bad from a constitutional point of view.

Mr. Bryden said that the local committee

had already adopted a resolution on the lines suggested by Mr. Cook, but no notice had been taken of it.

The Chairman replied that that resolution was never sent. There were reasons, therefor. The Council had never been appealed to in the way this meeting would.

Mr. A. R. Castle asked what was the reason for Mr. Bryden's expulsion from the Association? Did the Council consider that his letter was a personal attack, or was it because his criticisms were untrue?

Mr. Bryden: There is a rule by which a man can be expelled without any explanation being given him.

The Chairman read this rule, and also the letter of the Council informing the local division of their decision regarding Mr. Bryden. It was stated therein that the decision was unanimous, and it was also asked that Mr. Bryden should at once hand over all books, cash, etc., to the assistant hon. secretary, who would deputise for a time, the Division later on to call a meeting to elect a successor to Mr. Bryden. This letter had been sent to Mr. Wilson (chairman of the Northern Division), but as that gentleman was in France it had come into his (Mr. Cook's) hands as vice-chairman.

Mr. Semper said it was incorrect to state that the Council's decision to expel Mr. Bryden was unanimous. Several members did not vote. The only reason given for expelling him was that his criticisms might hurt the Association.

Mr. Bryden said he had been elected secretary by the Northern Division, but the Council had ridden over the heads of the Division and had not consulted the latter.

Eventually, after further discussion, a resolution was framed to the effect that that meeting deeply regretted the decision of the Council of the Kent Bee-keepers' Association in expelling Mr. Bryden for asserting his right of free speech, and earnestly called upon the Council to rescind its decision within seven days, failing which the Division would have to take into consideration its future relationship with the Association, and, if necessary, form a new organisation.

Meanwhile, the Chairman and the Mayor (Councillor A. E. J. Price) were conferring together, and the Chairman observed that it had been pointed out to him that Mr. Bryden's letter in the BRITISH BEE JOURNAL was signed "George Bryden, hon. secretary, Northern Division." Mr. Bryden, like many of them, was perhaps a little impetuous, and it might have been felt by the Council that this letter represented the views and policy of the Northern Division, whereas Mr Bryden only gave those views in his capacity of a private bee-keeper. At the same time, he (Mr. Cook) did not believe that there was any personal animus on the part of the Council towards Mr. Bryden.

Mr. Bryden said he had known the Mayor for many years as a shrewd man. He had just pointed out to him (Mr. Bryden) that he had no business to add the words, "Hon. Secretary, Northern Division," to the letter. This was the first time this point had cropped up, and he did not think that the Council, with all their ingenuity, had seen it. He was quite prepared to accept the Mayor as peacemaker, and to ask that the question be re-opened, at the same time apologising to the local Division for having acted in an official capacity in writing a letter instead of as a private individual.

Eventually the first resolution was withdrawn, and another substituted to the effect that at a meeting of the Northern Division of the Kent Bee-keepers' Association, Mr. Bryden had regretted writing this letter in the name of the Division, and now withdrew it as having been written in their name: and the meeting now asked the Council to re-consider the question of Mr Bryden's expulsion from the Association.

A member pointed out that this seemed like eating humble pie, but the Chairman disagreed.

The resolution was then put to the meeting. About half of those present put up their hands in favour: the others did not vote.

The Chairman: There is no one to the contrary. I shall declare it a unanimous vote.

British Bee-Keepers' Association.

The monthly meeting of the Council was held at 23, Bedford Street, Strand, London, W.C.2, on Thursday, February 16, 1922.

Mr. W. F. Reid presided, and there were also present Sir Ernest Spencer, Messrs. G. Bryden, E. D. Lowes, G. R. Alder, E. Walker, F. W. Watts, A. Richards, J. Herrod-Hempsall. Association representatives: R. R. Babbage (Middlesex), E. G. Waldock (Surrey), E. Ft. Ball (Bucks.).

The minutes of the previous meeting were read and confirmed.

Letters of regret at inability to attend were read from Miss M. D. Sillar, Messrs. T. W. Cowan, C. L. M. Eales, G. J. Flashman, G. W. Judge, W. H. Simms.

Mrs. M. A. Prys Owen and Mr. E. Loxley were elected members.

The Herefordshire and Cardigan and District Associations nominated representatives on the Council, and both were accepted.

The report of the Finance Committee was presented by Mr. Bryden, who stated that payments into the bank for January amounted to £29 6s. The bank balance on February 1 was £236 8s. 5d.: payments amounting to £43 1s. were recommended.

The auditing of the balance sheet not having been completed, it was decided that it be left to the annual general meeting.

The Surrey Association applied for a preliminary examination at their annual show at Guildford, and it was granted.

The matter of insurance in Ireland was raised, and the hon. secretary was instructed to communicate with the underwriters on the subject.

Next meeting of Council, March 16, at Pritchard's Restaurant, 79, Oxford Street, London.

Bishop's Stortford Bee-Keepers' Association.

ANNUAL MEETING.

The annual general meeting of the Bishop's Stortford District B.K.A. was held on Friday evening, Feb. 10, at the Institute, Water Lane, Bishop's Stortford, Mr. Frank Fowler (vice-president) presiding over a good attendance of members.

The hon. treasurer's (Dr. J. Young) report showed the Association's finances were in a sound condition. The cash account for the year reached a total of £134, with a balance of assets over liabilities of £30.

The hon. secretary's report dealt at length with the various phases of the Association's work carried out during the year—the recent development of an experimental apiary receiving particular attention, mention being made of the indebtedness of members to Mrs. A. S. Barrett, who had been a keen supporter of the Association since its inception, having made this development possible by placing the orchard at her residence at the disposal of the committee for this purpose. The beneficial influence this scheme could be made to wield was indicated, and some lessons were drawn from similar movements in other parts of the country and abroad.

The area embraced by the Association was being steadily extended, and consequently the membership was increasing in proportion.

The hon. secretary paid a warm tribute of appreciation for the loyal help and encouragement that had at all times been accorded him, especially associating the names of Dr. Young and Mr. H. G. N. Wendover.

Both reports were unanimously adopted, and on the motion of Mr. T. Ward, seconded by the chairman, a hearty vote of thanks was tendered to the hon. secretary (Mr. E. P. Hussey) for the valuable work done during the season.

The question of the recent alteration in the County Association's rules regarding the contributions of branches to the central funds, among other points, was discussed at length, and it was unanimously decided, in consequence of their adverse effect locally, that in their present form they were quite unacceptable.

A further resolution moved by Mr. Ward was also unanimously carried, re-establishing the Association upon an independent basis.

The election of officers and committee was then proceeded with, and upon the motion of the chairman, Mr. R. E. Johnston, J.P., of "Terlings," Harlow, was invited to become president. Vice-presidents, treasurer, and committee were re-elected, the latter with power to co-opt other members as may be found desirable.

The hon. secretary stated that the work had grown to such an extent that he could no longer properly perform all the duties, and moved the appointment of Mr. Wendover as joint secretary, which was carried.

Mr. Wendover will undertake the general secretarial duties while Mr. Hussey will continue to deal with the expert and technical matters.

Rules governing the Association's constitution were also decided upon. The programme for the coming season was then gone into, and it was agreed to continue the co-operative scheme for the supply of bee-keeping appliances to members, and the hon. secretaries were instructed to arrange open-air demonstrations and lectures to be given at the apiary during the summer, the opening one to be by Mr. Wm. Herrod-Hempsall, F.E.S., on "Queen Rearing."

A hearty vote of thanks to the chairman terminated a most enjoyable evening.

Mr. Wendover's address is 30, Lindsay Road, Bishop's Stortford.—(*Communicated.*)

Surrey Bee-Keepers' Association.

This Association is making an earnest effort to help followers of the craft in the county. A free expert visit has been promised to all members this year who pay the annual subscription by March 31.

On Saturday afternoon, February 18, the Rev. E. J. Newill presided over a well-attended meeting at the Witley Institute, when Mr. G. W. Judge, (Official Instructor, Kent and Surrey County Councils) gave a very interesting lecture, outlining a year's work in an apiary. The instruction was on practical management with the object of honey production always in view, and the advice given was duly noted by those present.

After the lecture it was decided to form a branch of the association to include the districts of Godalming, Hambledon, Witley, Chiddingfold, Haslemere, Hindhead, etc., under the secretaryship of that well-known bee-keeper, Mr. M. J. Lamboll, of Siddinghurst, Chiddingfold.

Several new members were enrolled.—E. G. W.

CORRESPONDENCE.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real name and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

Free Wallflower Seed.

[10633] In 1920 I took 80 lbs. of extracted honey from my best stock in May. This part of the country being well stocked with fruit trees, it is important to get the stocks well forward so that they may obtain full advantage of the apple-blossom, etc.

I still have a quantity of orange wallflower seed for free distribution to bee-keepers if they will kindly enclose stamped addressed envelope.—J. H. LEE, "Little Bowden," Burgess Hill, Sussex.

Record Honey Crop.

[10634] I notice in your current issue, page 48, what is headed "A record yield from one hive," viz., 383 lbs. This is certainly a splendid harvest from one hive, but it is *not* the record. In Mr. R. Whyte's interesting catalogue of Dutch bees, page 13, he says, "In the matter of honey production, and it is for honey bees are kept here, I find these Dutchmen quite up to anything I have ever had; in fact, it happens that the record 'take' of honey is held by a Dutch stock, which harvested 439 lbs. of honey in the year 1915."

I may say Mr. Quayle's published "record" was beaten by Mr. Quayle himself the following year. The actual figures were given to me by Mr. Quayle, but at the moment I cannot lay hands on the figures.—J. S. BRYCE.

The Bee-Keepers' Calendar.

[10635] I must congratulate the Editors, and the compiler of this excellent feature. It is one more incident evincing the literary interest being taken in the bee, and affords some satisfaction that the bee in literature is now being dug out.

It may interest the Editors and readers of the JOURNAL to learn that an "Anthology of the Bee," has been compiled with much care and labour extending over the past three years, and is now nearing publication.—M. ATKINSON.

Fakenham, February 9, 1922.

Candy Making.

[10636] One, having read the various recipes for candy making, might almost be excused for thinking that the art of candy making was, after all, an exaggerated one. The quantity of water that can be used in the process varies from 1½ pints (see a "Modern Bee Farm") to 5 pints (see the B.B.J. recipe to be used with the Ideal thermometer) using, in each case, 12 lbs. of sugar. But your readers will not be very far wrong if instead of finding out, by trying them all, which makes the best candy, they begin and end with about 2½ pints of water, if by chance they prefer to begin with the maximum amount of 5 pints, they may find the process, to say the least of it, a little tedious.

We are told in many bee books to place a sloping board from the hive entrance to the ground; in the good old days, when one did not object to crawlers getting back to their hive, the advice was good.

If any of your readers see crawling bees at the beginning of next month, and know of no "cure" that they have confidence in, they could do but little further harm, and perhaps much good if they at once gave 2 lbs. of hot, thick syrup in a rapid feeder. Should they think that they notice any benefit, they could repeat the dose in a week or ten days, and so on.

Of the correctness of the following statement I have but little, if any, doubt. Soft, dry hay makes the very best packing over the quilts, and is made the best use of it kept on both summer and winter, it may be pressed down more carefully in winter and spring, and kept down with thin pieces of wood and a heavy stone.—W. W.

Notices to Correspondents

Correspondents desiring an answer in the next issue should send questions to reach this office NOT LATER than the FIRST POST on MONDAY MORNING. Only SPECIALLY URGENT questions will be replied to by post if a STAMPED addressed envelope is enclosed. All questions must be accompanied by the sender's name and address, not necessarily for publication, but as a guarantee of good faith. There is no fee for answering questions.

"NERO" (Staffs.).—*Use of extension board.*—(1) We take away the extension alighting board during the winter. You will be able to see if there are any stores by just turning the quilt back. This may be done any warm day, but do not disturb the combs for another month or six weeks. (2) "The British Bee-keepers' Guide Book."

H. K. S. (Surrey).—*Spraying with Phenyle.*—It will be quite safe to use Phenyle for spraying entrances to hives. Either of the other disinfectants would probably be better, but of the two we prefer "Bacterol," one tablespoonful to a quart of water.

We have found no ill-effects from using the coloured methylated spirit for dissolving N. Beta.

J. J. (Mon.).—*Making swarm boxes.*—You cannot have anything better than a nucleus box with plenty of ventilation. There is no need to put frames or combs in with a swarm.

"NOVICE" (Cambs.).—*Immune bees.*—(1) No strain of bees are immune from "I.O.W." disease. The Italians are resistant. There is now a fair chance for a beginner to keep clear, and advise you to get Italians. (2) Better get the bees early in April. (3) "The British Bee-keepers' Guide Book." We stock this and other bee literature.

H. E. W. (Purley).—*Separators between sections.*—If you want good even sections separators must be used, but for home consumption, if you do not mind the risk of brace combs and sections of unequal size and weight, you could dispense with them.

Suspected Disease.

"PEGGY" (Maryport), "MICHAEL ANGELO" (Notts.), M. A. P. (Llanbedr), H. F. C. (Byfield).—The bees were affected with Acarine disease.

R. W. S. (Yeovil).—The trouble is Acarine disease. It will probably be better in the end to destroy them.

Bee Shows to Come.

May 24-27 at Guildford.—Surrey B.K.A. Show. Two Challenge Trophies, Apis Club Silver Medal, B.B.K.A. Silver and Bronze Medals and Certificate, Surrey B.K.A. Silver and Bronze Medals, Open Classes Honey, Wax, Appliances etc., Demonstrations, Lectures, etc.—Hon. Secretary, W. E. Hamlin, 43, Norbury Court Road Norbury, S.W.16.

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One Penny per Word.

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PRIVATE ADVERTISEMENTS.

WILLOW HERB, blossoms July till frost; plant now; 12 2s. 6d.—BOWEN, Apiarist, Cheltenham. b.85

2½ CWT. finest Suffolk Honey, £7 cwt. tins, carriage free.—SPRATT, Grove Farm, Occold, Eye, Suffolk. b.70

HIVES, 10s.; Racks Shallow Combs, 4s.; Q. Excluders, 1s.; Brood Frames, 19s. per 100; Shallow ditto, 18s.; Dadant Shallow Foundation, 3s. 3d. per lb.—17, Beverley Road, Canterbury. b.71

TO CLOSE AN ESTATE.—Several 10-frame Stocks healthy Dutch and Italian Bees, in bar-frame hives, nearly new. April delivery, £5 each, carriage paid.—Apply, by letter, TATHAM, "Sycamores," Granville Road, North Finchley, N.12. r.b.72

ORDER NOW. Two Stocks of Italians, 8 frames, healthy, crowded brood and stores, delivery April, 85s. per stock, carriage paid; box 10s. extra, returnable. Cash with order.—Stevenson, Egleton, Oakham. b.73

20 STRONG STOCKS ITALIAN HYBRIDS, good working strain; free from disease; satisfaction guaranteed; April-May, 90s., carriage paid; Hive, 20s.; box 10s. extra, returnable.—REV. COOPER, 62, Park Hill, Carshalton. r.b.75

"EUPHANERON" LANTERN, with complete acetylene and limelight fittings, sheet 12 x 12, new condition, £9. Italian Stock, 10-frame, complete with hive, early April delivery, £5.—FRANCIS, Kurnella, Shoeburyness. b.77

FOR SALE, two Hives, together with all the apparatus required for bee-keeping.—Apply (by letter in first instance), 292, Willesden Lane, N.W.2. b.79

OFFERS 7 cwt. clover blend Honey. Swarms booked, May delivery.—NORTH, Notley, Witham, Essex. b.92

FOR SALE, two strong Stocks in frame hives, also empty Frame Hive with Supers complete. What offers?—MRS. MORTON, Heath Lodge, Lexden, Colchester. r.b.93

BEAUTIFUL LINC. HONEY, granulated, 1s per lb. in 10- and 12-lb. tins; carriage paid on 50 lbs.; sample 4d.—CURTIS, Fenland Apiary, Holbeach. b.68

SIX strong 10-frame Stocks Italian and Italian Hybrids, healthy, April-May, 75s., carriage paid; box 10s. extra, returnable.—BIRD, 40, Frederick Road, Cheam. b.53

TO MY OLD CUSTOMERS AND NEW ONES!—700 1-lb. parchment pots (stamped) of granulated gnaranteed pure Lincolnshire Honey, 1s. 6d. per pot, carriage paid; sample.—WOODRUFF WHITE, Penny Hill, Holbeach, Lincs. b.55

GOOD Light English Honey, granulated, £7 cwt. on rail, tins free, deposit system; sample 4d.—SACK, Barley, Royston, Herts. r.b.23

SURPLUS.—Stock of Bees on 10 frames and Hive, healthy.—CARTER, Goldsands, Southminster. r.b.94

SEVEN unbound volumes BEE JOURNAL, 1915-1921. What offers?—BEESON, Southwell, Notts. b.30

BEE-KEEPER, experienced all branches, good carpenter, wants situation.—Box 53, BRITISH BEE JOURNAL Office, 23, Bedford Street, Strand, London. r.b.46

SWARMS booked for coming season, May and June, 25s. Cash with order. 5 cwt. first-grade Honey for Sale, the lot or divide.—HALFORD, West Wratting, Cambs. r.b.47

GARDENER-BEE-KEEPER requires situation, experienced inside and outside work; speciality, fruit culture.—WM. HODGINS, Gelli, Crynant, Neath, Glam. r.b.51

12 STOCKS ITALIAN BEES on 8 frames, 70s each, delivery April; guaranteed healthy.—ENNEVER, 2, Oak Avenue, Enfield. a.52

VERY finest quality Hampshire Honey for Sale; 5 cwt. in assorted size tins.—Box 50, BRITISH BEE JOURNAL, 23, Bedford Street, W.C.2. a.24

FOR SALE, six Simmins' Double Conqueror Hives, with section racks and supers, in very good condition, £5 each.—E. R. & A. DEBENHAM, Bladen Dairy Farms, Briantspuddle, Dorchester. r.b.13

COMPLETE MODERN APIARY FOR SALE, consisting of 40 strong Italian Stocks (1921 Queens), in nearly new 13-frame Hives, zinc-covered roofs, each hive fitted with excluder and two supers; 4-frame Extractor, Ripener, Feeders, etc.; carriage paid in Great Britain; April delivery; £300, or near offer.—Box 48, B.B.J. Office, 23, Bedford Street, Strand, W.C.2. w.11

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THE SOUTH HAMPSHIRE APIARIES (Newton and Clarke) are now booking orders for Stocks, Nuclei and Queens. Best strains only bred. Speciality, 5-frame Nucleus. Honey and Wax Bought and Sold.—All communications, H. E. NEWTON, New Milton, Hants. b.39

20 ITALIAN STOCKS, £4 5s. each; 17 Blacks, £3 15s.; travelling boxes 10s. extra, returnable. Guaranteed healthy on arrival. Great satisfaction given to all customers last season.—J. YOUNGER, 16, Maid's Causeway, Cambridge. r.b.74

WICKHAM BISHOPS ASSOCIATION is now booking orders for early delivery. Prices: 5-frame Nuclei, 50s.; Stocks on 10 frames, 75s.; Swarms from 25s.—Address, BEE-KEEPERS' ASSOCIATION, Wickham Bishops, Essex. r.b.76

ITALIAN HYBRIDS.—Strong Stocks, 85s., March-April delivery; 3-frame Nuclei, 35s.; 4-frame, 42s.; all carriage paid; boxes 10s., returnable.—COLLINS, 45, Coronation Road, Sheerness. r.b.76

SOLD, SOLD, SOLD, 53 Ambrosian Swarms for April. Now booking 3½ lbs. Swarms and nonsing 8-combs Stocks for May; Stocks, 70s. Stamp for list.—AMBROSIA APIARIES, S. Farnborough, Hants. b.80

BUCKFAST QUEENS are the very best. 1922 Circular and Price List sent free on application.—REV. BR. ADAM, Buckfast, S. Devon. r.b.81

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QUALITY ITALIAN NUCLEI, 4-frame (3 frames brood), headed by 1922 Queens bred from special imported breeding queen, £2, carriage paid, delivery June; satisfaction guaranteed or cash returned in full; Nuclei as above, but on 16 x 10 frames, £2 15s.—E. W. D. MADOC, Mattishall, Dereham. b.100

TO CLOSE A PARTNERSHIP.—Offers wanted for ½ ton Foundation, standard brood and shallow frame size. Will clear in one or more lots. Offers for any quantities entertained.—McCLYMONT, 4, Barns Terrace, Ayr. b.82

GRAFTON BEES (hardy Italians) for results. Queens, Nuclei throughout season. Popular prices.—Full particulars, MASOM & HEDLEY, Grafton Regis Apiary, Stony Stratford. b.85

COLONIES, NUCLEI, SWARMS, QUEENS.—Choice profitable stock; three varieties bred. Art Booklet explains.—LIEUT. BOWEN, Queen Breeder, Cheltenham. b.84

"W.B.C." HIVES.—Make your own and save money. Detailed Working Drawings, easily understood, 2s. 6d.—CANDY, 28, Dovey Road, Moseley, Birmingham. b.87

"LAZENBEE" ITALIANS.—Booking now. Few choice 3-frame Nuclei, price 30s., May-June delivery.—KENDALL YOUNG, 100, Elms Apiary, Sudbury, Middlesex. r.b.89

FLAVINE CANDY, 4 lbs., 5s.; 6 lbs., 7s.; 10 lbs. 11s.; all post paid.—S. H. SMITH, 30 Maid's Causeway, Cambridge. b.97

WE APPRECIATE THE MANY CONGRATULATIONS received on our enterprise in originating the giving of an absolute guarantee against Acarine disease. Our offer still holds good for all Stocks and Nuclei booked by April 5. A sporting proposition with no irritating conditions. Our Italians are the best little Bees we know, and we have failed to obtain evidence that better exist.—THE WELSH BEE GARDENS, Brecon (Lt.-Colonel Weaver Price). We Buy Beeswax. State price. Quick payments. b.67

DUTCH BEES.—Send for my artistically Illustrated Catalogue outlining my method of managing bees profitably. Read my notes on Queens and Queen Rearing. Will interest the expert and amateur. Free for the asking.—WHYTE, Bee Farm, Cumbernauld Station, Dumbartonshire. r.b.58

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MY CHOICE GOLDEN ITALIANS, favourites amongst prominent apiarists, are again offered in rotation. Queens and Nuclei.—E. COOMBER, Breeder of Superior Golden Bees, 64, Ronald Park Avenue, Westcliff-on-Sea. b.40

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BEES, noted disease-resisting strain. Limited number of Stocks April, May, Nuclei onwards; prices moderate; orders in rotation.—SMITH, 5, Florence Terrace, Ramsgate. r.b.35

BRITISH bred Italian Nuclei and Queens. Prices on application. — CHARMAN BROTHERS, West Hill Apiary, Brookwood. r.b.4

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200 LBS. HONEY, 10 Stocks, from one Queen, Melton ex Simmins; proved honey producers. Queens, Stocks, Nuclei, Swarms. Book now.—MASON, Melton Apiary, Willerby, Hull. a.37

MAY SWARMS, £1 12s. 6d., packing, carriage free; 4-frame Nuclei (May), 42s., carriage paid; boxes 8s. extra, returnable.—H. WELCH, Wickham, Hants. r.b.22

QUEENS by return from April till October.—PEARSON & GALE, Marlborough. w.14

NEW HARDY YELLOW VARIETY.—No loafers hottest days. Gathered honey 1921 after all others had retired from business.—Particulars, S. SIMMINS, Queenland, Heathfield, Sussex. r.a.13

THE WELSH BEE GARDENS, Ashgrove, Brecon (Proprietor, Lt.-Colonel Weaver Price).—Now booking Stocks and Nuclei. Highest grade Italians. r.a.16

GUARANTEED MAY DELIVERY of pure Italian, also pure Dutch 5-frame Nuclei, 37s. 6d. (strong lots), 8s. 6d. every additional frame of brood and bees; Swarms same price; carriage paid. Satisfaction or returnable (rotation). If preferred half deposit now, balance later.—A. LONGLEY, 35, Tharp Road, Wallington, Surrey. b.88

STRICTLY BUSINESS.—One dozen Flavine—8 Powders, 1s.; a Japanned Sprayer, post free, 6s.; a Floorboard Feeder, to fit under any hive, 10s., post paid.—S. H. SMITH, 30, Maid's Causeway, Cambridge. b.63

CARNIOLANS, British-bred in isolated apiary: one quality only, the best: Queens, 10s.; Nuclei from 45s.—SWAFFIELD, Libertus Villas, Cheltenham. r.b.61

SKEPS, SKEPS, SKEPS.—The best and cheapest ever made, 14 in., 10 deep. Special Skeps made to order. Can supply any number. Wholesale and retail. Write for Price List.—H. SEAMARK, Straw Skep Manufacturer, Willingham, Cambs. b.62

THE ACARINE 1921 ECLIPSE PAD.—It knocks out mites and moths. Your money back if not satisfactory. Price 5s., post paid.—S. H. SMITH, 30, Maid's Causeway, Cambridge. b.64

ADMINSON'S SEMI-COMBS.—Nuclei on these combs from mid-May at cheapest rates.—PEARSON & GALE, Marlborough. r.b.66

For best bees, queens and appliances come to PEARSON & GALE, Marlborough.

HAVE YOU READ "THE BEE WORLD"? If not, why not? Every number in itself is a useful literary work for practice and reference. Specimen copy free.—Offices: THE APIS CLUB, Port Hill House, Benson, Oxon.

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Letter, with repeat order, from the same customer, dated 21.5.21, commences:—

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The Bee-Keepers' Calendar.

MARCH, 1922

2 Thursday. "We are like bees foraging in the garden of the world, and hoarding the honey in the hive of memory. And no hoard is like any other hoard that was or ever will be."
Alpha of the Plough, "A Bit of Seaweed."

3 Friday. "Him, like the working bee in blossom-dust,
Blanch'd with his mill, they found."
Tennyson, "Enoch Arden."

4 Saturday. "He spoke of the grass and flowers and trees,
Of the singing birds and the humming bees."
J. G. Whittier, "Maud Muller."

5 Sunday. "The bee is little among such as fly;
But her fruit is the chief of sweet things."
Ecclesiasticus xi. 3.

6 Monday. "For so work the honey-bees,
Creatures that by a rule in nature teach
The act of order to a peopled kingdom."
Shakespeare, "King Henry V."

7 Tuesday. "In short
All the sweet cups to which the bees resort."
Leigh Hunt, "An Italian Garden."

8 Wednesday. "In lawns the murmuring bee is heard,
The wooing ring-dove in the shade."
W. C. Bryant, "The West Wind."

Unedited Letters of Francois Huber.

In 1891, Mr. Ed. Bertrand published "The Unedited Letters of Huber" in the original French, in Switzerland. Mr. C. P. Dadant, editor of the *American Bee Journal*, has translated these letters into English, and is publishing them from time to time in the *American Bee Journal*, with the "Introduction" as given by Mr. Ed. Bertrand. The editor of the *American Bee Journal* intends eventually publishing these letters in book form, and has very kindly given us permission to publish them in the "B.B.J.," allowing us the sole right of doing so in this country. The name of Huber, his patient research into what in his day were the mysteries of bee life, and his careful and accurate observation in spite of the great handicap of blindness are too well known to need any advertisement from our pen, and we have no doubt these letters will prove of the greatest interest. The first instalment will be found on another page.

A Dorset Yarn.

" 'Tis yours to judge how wide the limits stand
Between a splendid and a happy land."

Those, like myself, who have worked on the estates of the wealthy will never forget the years of pleasant service there. We have seen the splendid mansions, splendid houses, splendid grounds, with splendid trees and lakes, and have seen them at all seasons. We have seen " the stately homes of England " at their very best; we have seen " all the panoply of wealth," giving pleasure to those who were, like the owner, living mostly for pleasure, yet these large estates (that are often miles away from towns) have, ministering to the pleasures of the owner, some of the happiest men, who rarely have been from the estate from boyhood to old age. One who has recently died boasted that he had only twice been in a train.

A keeper I knew when a boy, whose house was in a lonely part of the estate, was one of the cleverest naturalists I have ever met among the working people. He was like the keeper in Hardy's novels. He had bees in his garden. They were from a wild lot that had been in a hollow tree for many years, and they had increased till he had a great many. He always made his own skeps, of straw, rushes and bog grasses; he had small supers to place over the tops to get surplus for his own use. He had, at the time I knew him, never sulphured them, as Hardy's keeper did; if one died in the winter, the combs were boiled in a cloth to get out the wax, the skep did duty again for a new swarm in another season. He made the skeps in the long evenings of winter. His employer was afraid of poachers, but the keeper did not worry about them; he was known as the strongest man on the estate, and poachers gave him a wide berth. He had plenty of time, as he could neither read nor write; work to him was recreation. His house was a museum of wild animals that he had got on the estate. All the skins had been dressed and set up by himself, but his love of bees was as great as that of anyone I have known. The forage for his bees was always a query to me, who lived in the gardens, where flowers were plentiful. He had a mile of woods, both of dry land and bog land; his bees had to get all their stores from these trees. He it was who first proved to me that the oak was of great service to bees; we would both sit beneath and hear the loud hum of thousands of bees above us, and this was after the flowers were over; it was the sweet sap that was forced through the outer bark of the young growth.

It was about that time that I first read Burns. " Spicy forests, ever gay, shading from the burning ray; Wildly here, without control, Nature reigns and rules the whole. Here wild woods grow and rivers flow, and mony a hill between." To him the woods were never lonesome; he could find his way on the darkest night, and could tell at once when his feet deviated from the paths that he had traversed so often. He could show you the most beautiful parts of the estate where the woods and lakes joined, where " The wanton coot the water skims, Among the reeds the ducklings cry, The stately swan majestic swims." Here, in winter, the willows of many colours grew; the bark kept the colours of silver, golden, and red, as well as the tints of green, but in summer, when all had on their gayest dress, all planted for effect, with silver and Lombardy poplars, it was very pleasing indeed. All these ponds were liberally planted with every plant that would grow on the margins, and water lines in the parts where it was not too deep for them.

It was a liberal education to me, who had so little of school, to go with one who had had no schooling at all, to tramp by lake and stream, through coppice and forest. The poplars when in blossom attracted many insects, mostly bees. These trees grew to a great height in the rich, moist soils; so many trees gave such a long time for blossoms. The willows gave the bees a good start; these grew liberally where the soil was moist, and were to be found in dry soils as well. They finished in summer with sweet chestnuts, these were in great numbers; privets were largely planted for cover, these gave a lot of flowers for bees, but his bees had no clovers or sainfoin, the pasture fields were too far away from them. The ponds were quite half a mile from them, but he always declared that his bees went there, but he claimed all the bees that visited them, though there were so many in the trees living in a wild state.

We two young men were happy; my time off from the gardens was spent in the woods, where all animal life found a home. The only time in the year when he was tied was when he was raising pheasants; when very small they had so many enemies—hawks, weasels, etc. Every sound at night was known to him; he would wait and watch for foxes when I had fallen asleep. Summer nights were delightful, but in autumn, " when raving winds around were blowing, and yellow leaves the woods were strewing," the nights were not so warm, but the wind above the tree tops seemed to be full of voices, the different trees seemed to make a different note as the wind whistled through them.

On this estate every man lived to add pleasure to the owner, and, in giving him pleasure, we two got the most happiness out of life. As I read the books lent me, I would tell him of them in the silent watches of the night; he, in turn, would tell me of the wild life in the woods. Though many years have passed, " I can see the groves and spreading trees, I hear the wild birds singing." I may not have these lines quite right, but it is as I remember them. The point I want to bring out is that he was the only one on these miles of land that had bees, other than the owner. On this estate alone there were many cwts. of honey wasted for the lack of bees to harvest it. " 'Tis yours to judge how wide the limits stand, Between a splendid and a happy land." A happy land can only come where man is free, where he has his own bit of land to till, and his bees to help him on to fortune; when he sits beneath

his own apple trees, when he hears "Among the trees, the humming bees at buds and flowers singing"; when he lives in his own house—small it may be, but if it is his he will be happy. Small holdings with constant toil will soon make small owners; if they add bees to the holding to harvest the honey which is now wasted, they will then see "how wide the limits stand between a splendid and a happy land." J. J. KETTLE.

Jottings from Huntingdonshire

Singularly enough I intended writing on the question of hiving swarms and adjusting the frames to the size of the swarm this week. Happily last week Mr. Macdonald wrote on the same subject, and he being better able to write for beginners than I am, it leaves me free to respond to an appeal from the nature lovers who wish I would give some nature notes each week. Mr. Macdonald being one of the greatest living beemen, can always be followed, he will, however, not mind my saying that when he speaks of frames he means the standard size. I mention this as some beginners who have written me say they are going to commence with large frames.

This week has been a great one for the bees, so far as weather is concerned. Beautiful balmy days, with occasionally soft, blustering winds have tempted the bees forth in thousands. This morning was wonderful. The sun rose in all his might. There were no coral tints to herald the dawn, no clouds of flaming red, no purple hues, no pink and orange colourings in the sky. The eastern horizon was just gilded with gold, when up rose the sun, casting wondrous moving shadows over the emerald sward, and shading off the hills in a hazy blue. The day was young when the bees came forth, dashing like arrows to the pollen yielding flowers Never before did I realise how inadequate a few hundred garden flowers were to foraging bees. Each aconite bloom was the scene of a contest; at least six bees to a flower struggling to gather the pollen for their grublike sisters. Some, wiser than the rest came back with pollen of a cream-like colour, while themselves were well covered with dust. The source was plentiful, and I could not resist following their flight. I had not far to go. At a farm near by they were grinding beans and peas, and as the meal was shot down in the corner of the granary, bees too numerous to count settled on it, and by great perseverance and various evolutions managed to gather what they needed and went home almost white. They reissued from the hives bright enough, so doubtless they were cleaned of the dust by their sisters within. The coltsfoots now blooming apace have not yet attracted the bees. They would be better pleased if this plant was allowed to grow in clumps, but the farmers take care of that. Precocious charlock plants have flower stems, and occasionally one sees a flower, but not until fields are yellow with this weed will the bees go pell-mell to suck its sweets. By some strange freak of nature the primroses are very backward. Plants in ground facing south and sheltered, have hitherto flowered soon after Christmas, but, so far, I have not yet seen a primrose in bloom this year. Many timid violets are in blow, but, like the primroses, they do not appeal much to bees. The moral of all this is prepare, see that every stock is supplied with food for the time of the singing of the birds has come and the voice of the turtledove is heard in the land. There will soon be pabulum and to spare, if, by then, your hives are all a hustle with young bees, smile! If you see no signs of breeding going on look grave and discover the reason why. It is the greatest pity if the fruit blossom comes and goes before one's bees are of sufficient numbers for supering. I see the elm trees rich in bud, the blackthorn and alder full of unburst bloom. The aspens are already yielding propolis, the poplars load the air with a pungent perfume, the hornbeams and beeches are turning their twigs into egret plumes, while the oaks, sturdy giants that they are, must perforce allow their topmost branches to be stirred in the freshening breeze. What a contrast between the life of a bee and the life of an oak! Yet they are friends. I should like to know what the affinity is. If bees are flying you can always find some among the oaks. Can any reader tell us why?—E. F. HEMMING, Steeple Gidding.

West Country Whispers.

The bees seem to have awakened from their winter sleep, in fact, they have never confined themselves long together, the longest term only about ten to fourteen days. The young queens are already beginning to lay, as during every short spell of sun or when the air is soft the bees are very busy taking in pollen, and all the day long a few are flying in and out taking water in, which is so necessary for a colony with an active queen. The work of the intelligent bee-keeper will soon come along now and everything inside, such as feeders, section and super racks, dividers, and queen excluders should be looked over, cleaned and put away in readiness, so that the bee-keeper can find out just what he requires for the coming busy season in good time and send off his order to the dealers for frames, foundation, more supers and sections, etc. All spare hives should be well scrubbed out with a disinfectant of some kind (I use Izal, and believe it to be a very good cleanser). After letting them dry in the sun and air they could be given a coat or two of good paint, then they will be quite ready when the time arrives for spring cleaning at the end of March, or during the early part of April. Those stocks, which it is feared are short of stores, should have a good cake of candy given them; see that the roofs are watertight and everything will be well for the present. I have no doubt that all stocks have consumed a large amount of the stores, as they seem to have been so active (or, at least, mine have) all through the winter months. When the weather seems favourable they seem very happy on the laurustinus and the gorse which is out in places. The air seems full of their merry hum, which gives joy to the bee-keeper.—W. H. WOODSFORD, Chard, Somerset.

Unedited Letters of Huber.

INTRODUCTION, BY EDOUARD BERTRAND.

(Translated, and published by the kind permission of Mr. C. P. Dadant, editor "American Bee Journal.")

The "New Observations upon Bees" of Francis Huber make very interesting reading. When I resolved to read them, however, I did not anticipate the intense pleasure which they gave me. Indeed, if there are still literary productions of the late eighteenth century that are read, we know in how small a proportion. Hardly one book in ten thousand has withstood the test of time.

What a lesson in philosophy, and what a menace towards the future of our contemporary works! Concerning works of science this proportion is still more disastrous. Everything has changed, everything has been perfected in so speedy a manner that the recital of information dating back a century generally offers no interest for us. From the enormous accumulation of scientific works of that time, there are few capable of instructing us yet: and they are nearly all on Natural History. Among this élite, the "New Observations," of Huber, shine with a particular éclat, with an ensemble of qualities so harmonious and original that we should seek them vainly elsewhere. The charm of a style which is always pure is allied with a very simple and yet very clever exposé; the ingenuity of the observations is so extraordinary that one soon gives way to the sentiments of an aroused admiration for this blind man, whose genius was at all times equal to well-nigh insurmountable difficulties.

I.

Francis Huber, born in Geneva, in 1750, died in 1831.*

When he became blind he was engaged to Miss Aimee Lullin, and this young lady was faithful to him, in spite of the contrary advice which was given her. She was to be rewarded for it by the happiness of her entire life.

Huber narrates himself ("New Observations," page 1) how he became interested in bees. He was fond of sciences, and he did not lose this fondness when he lost his eyesight. He had his servant, Francis Burnens, read to him the best works of physics and natural history.

This man took great interest in these readings, and Huber quickly noticed his wonderful aptitude as an observer. He resolved to cultivate this talent, and caused him to repeat some of the most simple experiments of physics. These he executed with a great deal of skill, improving upon the few instruments that were intrusted to him, applying them to new uses, and even making himself the implements which he needed.

"The continuation of our readings," says Huber, "having led me to the beautiful works of Mr. Reaumur upon bees, I found in his book such a fine plan of experiments, observations made with so much art, a logic so wise, that I resolved to study particularly this celebrated author, to shape my helper and myself at his school, in the difficult art of studying Nature. We began by watching bees in glass hives; we repeated all of Reaumur's experiments, and we secured exactly the same results when we used the same processes. This agreement of our observations with his gave me great pleasure, because it proved to me that I could rely entirely upon the eyes of my helper.

"Emboldened by these trials, we attempted to make upon the bees some entirely new experiments; we contrived the building of several new hives, of which I had never thought, and which presented great advantages, so we had the good luck of discovering remarkable facts which had escaped the notice of Swammerdam, Reaumur and Bonnet.

"It is these facts which I now publish in this work, there is not one of them that we did not try several times over, during the eight years we made researches upon the bees."

This modest exposé retains surprises for the reader, for it does not give a presentiment of the importance and of the difficulties of the researches which followed.

Francis Burnens was not only an intelligent man, he was gifted with great tenacity. He often would follow, for 24 hours, without food, or rest, the actions of a few worker-bees which he suspected of being fertile, in order to detect them while in the act of laying. Once, even, he spent 11 days examining the bees of several colonies, one after another.

Huber directed the experiments, and devised them so as to retain the control. Nothing is more interesting than this association, which lasted too short a time, for in 1795 Burnens left him to live at Oulens, where his fellow citizens, aware of his capacity, made him a magistrate.

On the other hand, he did not cease his bee work, and from time to time he replied to the requests of Huber by additional experiments. I have had the good luck, through my friend Mr. Edward Pictet, to publish one of those letters of Burnens, in answer to a question upon the sphinx atropos ("Revue Internationale," 1885, page 85). A footnote of Huber, in communicating this letter to Mr. M. A. Pictet, of the Academy of Geneva, shows what sentiments Huber had towards Burnens.

"You will see that the writer of this letter has what is needed to become an excellent observer—good eyes and logic. You will

* His father, Jean Huber, had the reputation of being one of the wittiest men of his time, and was often cited by Voltaire, who appreciated his conversation. He was a pleasant musician, wrote poetry, which was even praised in the Ferney drawing rooms, was known for his quick piquant rejoinders, was an easy and talented painter, excelled in the art of cutting out paper landscapes in such a manner that he appeared to have created this method, carved better than an amateur sculptor, and to these talents he added the taste and the art of animal study. His work upon the flight of birds of prey is even now referred to with profit by naturalists. Jean Huber transmitted most of his tastes to his son. (From the notice of P. A. de Candolle upon Francis Huber.)

acknowledge that it is a pity that an instrument which I had sharpened be no longer in my hands. Burnens is Justice of the Peace at present ('New Observations,' preface); he does not waste his time; his entire life is being spent in preventing his fellow countrymen from eating out one another's white of the eyes' and ruining themselves in lawsuits. I had not thought that my lessons would put him there. His observation is very important. It proves that bees, which contract the entrances of their hives when they are threatened with invasion, do not do it when it is unnecessary. It is therefore the circumstances which prompt them; they never make any mistake." The first edition of the "Observations" on bees was published in Geneva in 1792. It contained a series of articles in the shape of letters to Mr. Bonnet, who had induced Huber to publish his notes. There was a re-impression published, in Paris in 1796, in one volume in 12, to which was added a short, practical treatise on bees, anonymous.

A second edition was made in 1814, in two volumes. For the second, Huber, for want of Burnens, employed his wife, and later his son, as assistant.

Born in Geneva in 1777, Pierre Huber died at Yverdon in 1840.†

This curious and beautiful work made the reputation of Huber, and secured for him a membership in most of the Academies of Europe, especially the Academy of Sciences in Paris. It also caused his being called at present the founder of modern bee-keeping.

(To be continued.)

† Pierre Huber, the son, was himself a naturalist of merit, already known through his "Researches on the Habits of Ants," published in Geneva and in Paris in 1810, and republished in 1861. Here is a list of a few of the bulletins which he published in periodical works:—"Memorandum on Divers Instruments of Physics and Meteorology" (Society of Physics and Natural History of Geneva, Vol. 2), "Notice upon a Migration of Butterflies" (ditto, Vol. 3), "Memorandum to Serve upon the History of the Caterpillar of Hammock" (ditto, Vol. 7, Part 1), "Relations of Ants with Lice and Gall Insects" (Brit. Biblith. of Science and Arts, Vol. 28), "Observations upon Several Species of Bees" (Vol. 6 of the Linnean Society of London). An extract from this was published in Volumes 25 and 26 of the British Library under the title "Observations on Several Species of Bees known under the name of Humble Bees," "Letters upon a new System of Meteorography" (Biblio. Universelle, 1828), "Letters upon Aeronautic Spiders" (posthumous article in Biblio. Universelle, 1866).

A Record Yield from One Hive?

[10637] Mr. John Berry's record (10626) is most interesting and remarkable, but I feel sure many bee-keepers would find it still more interesting if he would say how many frames of brood this "one hive" was built up from; also size of frames. I suggest that correspondents to "B.B.J.," in these days of giant stocks, should describe what "one hive" or "one stock" means when publishing information concerning same.—W. J. HAWKINS.

Kent Bee-Keepers' Association.

THE "BRYDEN" INCIDENT.

ANOTHER LIVELY MEETING OF BEE-KEEPERS AT ROCHESTER.

MORE FACTS BROUGHT TO LIGHT.

(Report from a local paper, continued from page 83.)

Members of the Northern Division of the Kent Bee-keepers' Association were again at Rochester Guildhall until 10 o'clock on Saturday night, January 21, discussing the dismissal of their hon. secretary, Mr. Geo. Bryden, by the Council of the Kent Bee-keepers' Association. It was the occasion of their annual general meeting, which followed immediately after a lecture on "The Management of Out Apiaries," by Mr. G. W. Judge (County Council Inspector in Bee-keeping), this lecture being under the auspices of the Kent Education Committee. Mr. Bryden was present at the lecture, taking notes freely, but retired before the business meeting, although the chairman, Mr. W. H. Cook (vice-chairman of the Northern Division), invited any of the outside public, who felt so disposed, to remain. Mrs. Bryden remained throughout the rest of the proceedings. Several members of the Council of the K.B.A. (who had held a private meeting at the Guildhall in the afternoon) also remained, and took part in the subsequent discussion, these including the chairman, Mr. T. Dewey, of Wilmington.

In opening the business, Mr. Cook went briefly over the same ground that was traversed at the meeting convened by Mr. Bryden on the previous Saturday. At the present moment the Northern Division could not do much business, because their books were still in the hands of Mr. Bryden, and up to the present they had not been able to persuade him to give them up. "This Bryden incident" was very unfortunate. It was still before them and they must get over it somehow. When he called it "the Bryden incident," he did not mean any disrespect to Mr. Bryden, neither was he advocating Mr. Bryden any more than he was the action of the Council in expelling him. He wanted to see the same mutual friendship as in the past. There were some of them who wanted a new organisation. He didn't. "Life's too short to quarrel," said Mr. Cook, "let's shake hands and be friends." He would now call upon Mr. Fry (their assistant hon. secretary) to give a brief report of the Council meeting held that afternoon.

Mr. Fry, in doing so, stated that any decision of the Council with reference to Mr. Bryden would come out later through their chairman (Mr. Cook). Nothing was to be stated that evening as to any decision. The chief item of business at the Council meeting was a discussion on the bee library at Dartford, and it was hoped that in the near future they would be able to take advantage of that library as well as of the books which were obtainable from the Kent Education Committee. Further, steps were to be taken so that appliances might be ob-

tainable at cheaper rates through the hon. secretaries of divisions. There was also a suggestion that the president and hon. secretary of each division should be members of the Council, but it was thought that the present system was better, as in some cases they might have divisional presidents who were mere figure-heads and would be no good on the Council. The Council also wanted the Northern Division to commit themselves to the running of a honey show, but under the present circumstances the Division did not see their way clear to have one. Mr. Fry went on to say that he hoped some means would be found to stop all this bad feeling and strife. It had been going on for two years. They must not overlook the fact that Mr. Bryden was a member of the Council, and a member of practically every sub-committee when he wrote his criticisms to the BRITISH BEE JOURNAL. During the three years that he (Mr. Fry) had been on the Council he could not remember Mr. Bryden bringing forward any of the arguments contained in his letter to that journal for the benefit of the Association. One would have thought, too, that Mr. Bryden would have written to their own official organ, *Bee Craft*, instead of to the other journal, which was really a rival Press. When the Council had unanimously condemned Mr. Bryden there must be something in it, but let them join hands and be brother bee-keepers.

Mr. Dewey (chairman of the Council): As far as the Council is concerned the matter is settled.

Capt. Leach: As far as the Northern Division is concerned the matter is not settled.

Mr. Dewey thought that the Council had treated Mr. Bryden very fairly. There was no doubt that he had been a very valuable member, but the Council gave him every opportunity to come forward and explain his action in writing that letter to the Press. They did not want to take drastic action, but Mr. Bryden came to the Council in a defiant attitude and said that he would withdraw nothing. The Council did not want any split. They had worked wonderfully well for many years. The only proper course now was for Mr. Bryden to come forward and give a proper explanation to the Council.

The Chairman said that the Council had decided to reply to the resolution passed at Mr. Bryden's meeting of the previous Saturday. That reply would be communicated to him (Mr. Cook), and from him to Mr. Bryden. He (the speaker) was going to act in the capacity of peace-maker, and was going to advise Mr. Bryden.

A member: A large number of members will not continue their membership unless they get a satisfactory answer, so it is useless now to elect a committee.

Mr. Cotterill said that he could not yet decide what side he would take. People would talk. If all one heard was true about Mr. Bryden from some people he was "not much." On the other hand, he had heard from a man upon whom he would "swear his life" that ——

Mr. Dewey: Let us have that!

Here Mrs. Bryden shouted something from the rear of the hall, but her remarks were not distinguishable amidst the general hubbub.

Mr. Cotterill: That man told me that Mr. Bryden had only used free speech and a free Press. Few men have done more for Kent bee-keeping than Mr. Bryden. Continuing, Mr. Cotterill said that he had been asked to stand as a member of the Committee, but he did not feel inclined to do so, for he was told that another association would probably be formed. Probably a good many members would go with Mr. Bryden. Then there would be two organisations in North Kent, and that would be "a rotten state of affairs," and he would not want to belong to either. (Applause.)

The Chairman said that the Council had asked Mr. Bryden to comply with certain conditions, and he had not done so.

Mr. Cotterill said he heard that Mr. Bryden had been working under a Committee, which had allowed him to do as he liked. Then why blame Mr. Bryden? It was such men as Mr. Bryden that made the world go round, not the slacker on the Committee.

The Chairman: I don't believe in that spirit that the King can do no wrong. I say that without any disrepect to the King. I admit that Mr. Bryden has been allowed to have too much of his own way. We have not put the bridle-rein on him as we should, though I'll say that we could never have had a better secretary.

Captain Leach: Did the Council arrive at their decision to expel Mr. Bryden because of his letter in the "British Bee Journal," or because of his disposition? If it were because of his criticisms, it was up to the Committee to reply to those criticisms.

The Chairman: Do you mean that the Council had something else at "the back of their neck"?

Captain Leach: Yes.

The Chairman: I'll ask Mr. Dewey to reply to that question.

Mr. Dewey: It was not owing to the criticisms, but because Mr. Bryden did not come forward and explain why he made those criticisms. The Council did not object to the criticisms, but Mr. Bryden was written to, and did not reply till he consented to appear. When he did appear, he did not wish to retract. Therefore, the Council felt that they had no other course but to ask him to resign. The Council did not expel him, but gave him seven days in which to retire.

Captain Leach: Is it usual to arraign members in front of the Council?

Mr. Dewey: No, but Mr. Bryden was a prominent member.

Captain Leach (warmly): Is it not usual for everyone to answer criticisms in the journal in which that criticism appeared?

Mr. Dewey: There were certain matters mentioned in the letter which Mr. Bryden should have brought before the Council. He would have had redress.

Mrs. Bryden: Everything he brought up was turned down!

Mr. Dewey: Oh, no; we have adopted many things he has suggested.

Mr. Cotterill: Has the Council the right to ask a Divisional Secretary to retire without consulting that Division?

Mr. Fry read the rule which stated that a member could be expelled without any reason being furnished as to why.

Mr. Dewey: Mr. Bryden was one of the Special Committee who drew up those rules!

Mr. Fry: It is the same in all Friendly Societies.

The Chairman said that Bryden was not expelled. He was placed in the same position as a sailor who was told to walk a gangway from his ship to the shore, and who found that no gangway existed; so he fell overboard! (Laughter.)

Mr. Dewey said that if any useful suggestions could be made that evening, the Council would be only too willing to get over the matter in the best way possible.

Mr. Cotterill said there was, to his mind, only one way out, and that was to ask the Council to refer this matter to the Northern Division.

Mr. Dewey: They won't do it.

Members were then beginning to leave the meeting, when Mr. Prior (a visitor) who was on the point of leaving to catch a train, asked to make a suggestion. He belonged to the Association, though not to the Northern Division. His suggestion was to carry on with their business in the ordinary way. Let them elect representatives to the Council, and let them have confidence in the men who represented them there. (Hear, hear.)

A proposition to that effect was moved and seconded, but Mr. Hensley moved, as an amendment, that the meeting be adjourned. This was duly seconded, but on being put to the vote, the amendment was lost by 10 votes to 6.

The election of officers followed, Mr. Cook being unanimously elected Chairman, vice Mr. Wilson, who is in France.

Mr. Cook, in returning thanks, said he would try to do his best in a fair and impartial manner. He would keep a sharp eye on whoever was Hon. Sec., and keep him in order, even if he could not keep himself in order.

After some persuasion had been brought to bear, Mr. Cotterill decided to accept the Vice-Chairmanship, and Mr. Fry was elected Hon. Sec.

Several of the old Committee were re-elected, excluding Messrs. Semper and Butler (who refused to stand owing to "the Bryden incident"). Several new names were added, and Messrs. Cook, Fry, Allen and Leach were elected representatives to the Council.

Honey Imports.

The registered value of honey imported into the United Kingdom during the month of January, 1922, was £16,507.—From a return furnished by the Statistical Office, H.M. Customs.

Staffordshire Bee-Keepers' Association.

ANNUAL MEETING.

The annual meeting of the Staffordshire Bee-Keepers' Association, held at the County Technical Buildings, Stafford, on Saturday, February 4, was presided over by the Rev. A. R. Alsop, one of the Vice-Presidents, in the absence of the President, Mr. A. H. Heath.

The Secretary (Mr. W. Griffiths) read the statement of accounts for 1921, which showed that the receipts totalled £87 16s. 10½d., which, after allowing for expenditure, left a balance in hand of £20 5s. 3d. The show account showed a deficit of £13 3s. 5½d.

In his annual report, the Secretary stated that they commenced the year with 305 members; 53 had since resigned or lapsed membership, six had died, and 30 members had joined the Association, which meant a net loss in membership of 29. The deficit on the show account showed an increase on the previous year, which was explained by the fact that the cost of the medals and various other charges had fallen on the account. The balance of £20 5s. 3d. showed a reduction of £12 9s. 4d., but the two accounts of £9 10s., which had decreased the balance, would not be incurred again. During the year the committee had arranged two shows, one in connection with the Staffordshire Agricultural Show at Burton, which produced 59 entries, and a members' show at the Technical Buildings, Stafford, which produced 82 entries. A record meeting of members and friends was held at the Farm Institute, Penkridge, in July, when they were honoured with the presence of Dr. A. Z. Abushady. An examination for the B.B.K.A. Preliminary Certificate was held in September at Penkridge, when the nine members who attended satisfied the examiner (Mr. W. Herrod-Hempsall). The Staffordshire Agricultural Society's Exhibition would be held at Uttoxeter on August 3, which he considered a very convenient date, and it was hoped that there would be a record entry of honey. With regard to the annual exhibition, which would be held in Stafford, the Secretary stated that he had received from the Apis Club a handsome silver medal for merit, to be awarded as the Committee decided, but preferably for a class for shallow metal semi-comb.

The Chairman having remarked that Colonel Heath had been associated with the Association since its infancy, it was unanimously decided to ask him to accept the office for the ensuing year. The Vice-Presidents, the Rev. A. R. Alsop and Messrs. H. J. Bostock and J. T. Homer, were also re-elected. The following were elected on the Committee:—Mrs. Parrington, Messrs. F. Amies, G. H. Hope, E. W. H. Knight, J. B. Leighton, G. H. Mytton, J. Stoney, I. Swanwick, and J. Swanwick.

Mr. W. Griffiths was unanimously re-elected Secretary and Treasurer, and the Chairman paid a tribute to his untiring efforts to help forward the work of the Association. The auditor, Mr. J. Rogers, was

also reappointed. Mr. Price was elected to represent the Association on the British Bee-Keepers' Association.

The Mayoress of Stafford, who was accompanied by the Mayor, Alderman T. A. Dunn, then presented the following :—

Certificates for proficiency in the preliminary examination by the British Bee-Keepers' Association, held at Rodbaston Farm Institute on September 4, 1921 :—Mrs. Leighton, Stafford; Miss Florence Wrench, Betley, Crewe; Miss S. G. Griffiths, Newcastle; Mr. A. Curran, Stoke; Mr. W. J. Palmer, Chesterton; Mr. M. Craddock, Rugeley; Mr. J. H. Smith, Wetwood, Eccleshall; Mr. G. W. Buttery, Doxey, Stafford; Mr. George Griffiths, Newcastle.

The Secretary proposed a vote of thanks to the Mayor and Mayoress (Alderman T. A. and Mrs. Dunn) for their presence, and to the Mayoress for distributing the medals, and the vote was carried with acclamation.

Mr. J. W. Crosby moved that the Committee should consider the reorganisation of the Association. He suggested that the county should be divided into districts, and that one experienced bee-keeper be appointed to each district to visit the members at least once a year, and report upon the apiaries visited to the Secretary. He suggested also the consideration of the advisability of the collective buying of appliances for members, and the organising of a sales department for the disposal of members' honey on a co-operative basis. With regard to the purchasing of appliances, makers appeared to be in a combine. If they formed a sales department they could put their honey on the market collectively and could say what price they were prepared to sell at.

Mr. G. Buttery seconded the motion.

The Rev. B. R. Hibbert said he agreed with what had been said as to dividing the county into districts. It was most important that bee-keepers should be encouraged in every possible way.

Mr. J. Price said it was an easy matter, as they already had the districts allocated, and also the local representatives. All they had to consider was the question of selecting district experts.

The Secretary said that at a meeting held in December a motion was passed that an expert should be allocated to each of the 13 districts. These practical men would not relieve the county expert of his work, because their duties would be purely supplementary. With reference to the purchasing of appliances, they had to make inquiries from appliance makers, and he had received several letters offering 7½ per cent. discount, and in some cases less. In his opinion, 7½ per cent. was useless, and was not worth bothering about. The Committee could not, therefore, recommend the members to entertain the idea of taking up a trading department. They were absolutely in the hands of the wholesalers.

The Rev. B. R. Hibbert moved that the recommendations of the Committee respecting districts and representatives be approved, and this was unanimously carried.

The question of the collective sale of members' honey was referred to the next Committee meeting for consideration.

Following the meeting the county expert (Mr. J. Price) gave a lantern lecture on the anatomy, pests, and diseases of the honey bee.—(*Communicated.*)

Surrey Bee-Keepers' Association.

KINGSTON DIVISION ANNUAL MEETING.

The annual general meeting was held on February 13, 1922.

Minutes of the previous general meeting were read and signed. The report of the Committee, together with that of the Expert, had been circulated. The Hon. Treasurer submitted his financial statement, which showed that the expenditure was slightly in excess of the income. There was a credit balance of just over £10. The reports were adopted.

The Committee and officers were re-elected, and Messrs. Hedger and Gibson were elected to fill vacancies on the Committee. Mr. Lamb was re-elected to represent the Division on the Council of the Association.

A hearty vote of thanks to the President brought the purely business part of the meeting to a close.

The members then settled down to a "Bee Talk," and a lively discussion was carried on for an hour and a half. The main conclusions arrived at were that every bee-keeper should belong to his County Association, because Associations make for better bee-keeping, and better conditions of the apiaries and the stamping out of disease. Those who do not join just sponge on those who do, by accepting the improved surrounding conditions without in any way assisting to bring them about. Big hives are evidently better than small ones. Annual re-queening with well-bred queens is desirable; it ensures strong, healthy stocks. That Committees of Associations should have first-hand knowledge of the condition of the apiaries of its members, and should not hesitate to call the attention of the owners to what is wrong. To enable this to be done, members should receive one free visit from the Expert annually, not only for the benefit of the bee-keeper, but as an official visit on behalf of the Association. In that way might be set up a system of voluntary inspection by inspectors appointed by the members themselves. B. CARTER, Hon. Secretary.

The Bee's Reply.

(*See Amateur's Anthem, page* 58.)

A was an Amateur Ass that annoyed ;
B was the bungling Brute that destroyed ;
C was the Crunch as he crammed in the Combs ;
D was the Desert he made of our homes.
E was our Energy ebbing away ;
Fiercely we fought for a mead of Fair-play.
G were the gloves we forced him to wear ;
H was his Head ; how we wished it was bare !
Idiot inspections, no purpose to serve,
Jolted and Jarred every delicate nerve.

Kindness was killed; it was war to the knife!
Labour relentless the Law of our Life.
Man is a Monster! he makes us all mad:
Nature neglected's not nearly as bad.
Odours of Onions and Offal around,
Poisoned our Pollen, polluted the ground.
Queen cells were quashed without question or Qualm;
Royal our Rage; but it did him no harm!
Smith says he supplies many Safe Panaceas
To tackle the mites in our tin Tracheæs;
Useless his Urgent addresses do lie,
Vice vies with violence, would we could die!
Weary we wax when the year's on the wane,
Xmas means rest till the spring comes again.
Y stands for "Yester year," change it we will!
Z stands for Zero, our chances are Nil!—THE HUMBLE BEE (translated by H.H.E.A.)

Bee Shows to Come.

May 24-27 at Guildford.—Surrey B.K.A. Show. Two Challenge Trophies, Apis Club Silver Medal, B.B.K.A. Silver and Bronze Medals and Certificate, Surrey B.K.A. Silver and Bronze Medals, Open Classes Honey, Wax, Appliances, etc., Demonstrations, Lectures, etc.—Hon. Secretary, W. E. Hamlin, 43, Norbury Court Road, Norbury, S.W.16.

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FOUR STRONG STOCKS, 19 frames, Italian cross, very strong, hives in good condition, 75s. per lot.—GEORGE CREASEY, JUNR., Stockhurst, Oxted, Surrey. c.1

"BRITISH BEE JOURNALS," 1910 to 1916, well bound, as new, 2s. 6d. each; "Gleanings," January-August, 1915, 3s. od.; January-December, 1914, 5s.; loose copies, 1919-1920, 2d. each; postage extra. BOWEN, Apiaries, Cheltenham. c.20

RARE BEE BOOKS. Can sell following: Gift Edition, "Honey Bee," Bevan, 1827; "Management of Bees," Bagster, 1838; "My Bee Book," Cotton, 1842; "About Bees," Jennings, 1886; "The Apiary," Neighbour, 1878; "Manuel of Bee-keeping," Hunter; "Rational Bee-keeping," C. de Ribeaucourt, 1878. Excellent condition. Offers invited.—BOWEN, Apiarist, Cheltenham. c.21

WANTED, copy of "The Honey Bee," by T. W. Cowan. Box 55, BRITISH BEE JOURNAL Office, 23, Bedford Street, Strand, W.C.2. c.29

SURPLUS ITALIAN STOCKS, delivery May. Honey Press, scarcely used, 25s.; excellent Honey, £7 cwt., free. DOUPE, Maam, Galway. r.c.2

AMERICAN GOLDENS. Surplus Stocks for disposal (Brockwell's strain), price according to number of combs. References may be obtained from Mr. J. Price, the County Instructor.—Particulars, J. BRACKEN LEIGHTON, 2, Henry Street, Stafford. r.c.3

BARGAIN. Three April, 1921, Brown Leghorn Pullets and Cockerel, "Snowden's strain," 63s.; approval; carriage paid. LONGLEY, 35, Tharp Road, Wallington, Surrey. c.4

SEVENTH YEAR of successful wintering through selected strain and qualities. Can recommend a few Stocks of Hybrids or Italians, 10-frame, £3 12s. 6d.; 8-frame, £3; carriage paid.—BALE, 1, Hodford Road, Golders Green, N.W.11. r.c.5

FINEST NORFOLK HONEY, granulated, £6 cwt. on rail; tins free.—ISAAC SOUTHERLAND, East View, Brancaster Staithe, Norfolk. r.c.6

FOR SALE, five 28-lb. tins best Cambridgeshire Honey, 1s. 6d. per lb., carriage paid, or nearest offer.—FEW, High Street, Haddenham, Cambs. c.8

WANTED, situation to manage bees; 25 years' experience comb honey production; would help garden or on farm, or would consider partnership in good district. HILL, 50, Westgate, Driffield, Yorks. c.9

FOR SALE, good, strong Stock Golden Italian Bees on 11 frames, £3 10s., 1921 Queen; box 5s., returnable.—WHETSTONE, Barrow-on-Soar. c.10

FOR SALE, two healthy Stocks and Hives of 9 and 10 frames each, £3 10s. each.—18, Blake Road, New Southgate, London, N.11. c.11

MODERN APIARY FOR SALE, consisting of 17 W.B.C. Hives, 14 Stocks Italian Bees, 4-frame Extractor, and all up-to-date Appliances.—Details, Box 54, B.B.J. Office, 23, Bedford Street, Strand, W.C.2. c.12

MAN, 26, single, abstainer, wants work; understands bees, farm, garden, and glass work; handy with tools. LEONARD, 69, Lady Margaret Road, N.W.5. c.13

TEN select pure Italian Stocks, Penna's 1921 Queens, guaranteed healthy, 80s. each, f.o.r., April delivery. JOHN RUMBALL, Ayot St. Lawrence, Welwyn, Herts. c.14

CAN OFFER strong surplus Stocks of Bees (Hybrids) on 6 standard frames, wired combs, 1921 Queens, good working strain, mid April delivery, 55s., carriage paid.—WM. CHANNELL, Grove Apiary, Histon, Cambs. r.a.70

GOOD GLAZIER'S DIAMOND, perfect, 8s. 9d.; double .12 bore Breechloader, perfect, 98s. 6d. —HUBBARD, Northkilworth, Rugby. r.c.15

GUARANTEED pure Essex Honey in tins, 28 lbs., £2; 1 cwt., £7 15s. Also strong, healthy Stocks in nearly new hives, £5 5s. each, carriage paid nearest station. TUNMER, The Apiary, Maldon. c.37

SWARMS.—Orders coming in fast, but can still book a few more at 30s., carriage paid. Cash with order.—HALFORD, West Wratting, Cambs. c.38

TWENTY strong 10-frame Stocks Italian Hybrids (Simmins' strain), April delivery, 90s. each, carriage paid; approval; deposit; box 10s., returnable.—ERNEST GRIFFITHS, Helsby, Cheshire. r.c.33

TO CLOSE AN ESTATE.—Several 10-frame Stocks healthy Dutch and Italian Bees, in bar-frame hives, nearly new, April delivery, £5 each, carriage paid.—Apply, by letter, TATHAM, "Sycamores," Granville Road, North Finchley, N.12. r.b.72

20 STRONG STOCKS ITALIAN HYBRIDS, good working strain; free from disease; satisfaction guaranteed; April-May, 90s., carriage paid; Hive, 20s.; box 10s. extra, returnable.—REV. COOPER, 62, Park Hill, Carshalton. r.b.75

FOR SALE, two strong Stocks in frame hives, also empty Frame Hive with Supers complete. What offers?—MRS. MORTON, Heath Lodge, Lexden, Colchester. r.b.93

BEAUTIFUL LINC. HONEY, granulated, 1s. per lb. in 10- and 12-lb. tins; carriage paid on 50 lbs.; sample 4d.—CURTIS, Fenland Apiary, Holbeach. b.68

TO MY OLD CUSTOMERS AND NEW ONES!—700 1-lb. parchment pots (stamped) of granulated gnaranteed pure Lincolnshire Honey, 1s. 6d. per pot, carriage paid; sample.—WOODRUFF WHITE, Penny Hill, Holbeach, Lincs. c.30

GOOD Light English Honey, granulated, £7 cwt. on rail, tins free, deposit system; sample 4d.—SACK, Barley, Royston, Herts. r.b.23

BEE-KEEPER, experienced all branches, good carpenter, wants situation.—Box 53, BRITISH BEE JOURNAL Office, 23, Bedford Street, Strand, London. r.b.45

SWARMS booked for coming season, May and June, 25s. Cash with order. 5 cwt. first-grade Honey for Sale, the lot or divide.—HALFORD, West Wratting, Cambs. r.b.47

GARDENER-BEE-KEEPER requires situation, experienced inside and ontside work; speciality, fruit culture.—WM. HODGINS, Gelli, Crynant, Neath, Glam. r.b.51

COMPLETE MODERN APIARY FOR SALE, consisting of 40 strong Italian Stocks (1921 Queens), in nearly new 13-frame Hives, zinc-covered roofs, each hive fitted with excluder and two supers; 4-frame Extractor, Ripener, Feeders, etc.; carriage paid in Great Britain; April delivery; £300, or near offer.—Box 48, B.B.J. Office, 23, Bedford Street, Strand, W.C.2. w.11

VERY finest quality Hampshire Honey for Sale; 5 cwt. in assorted size tins.—Box 50, BRITISH BEE JOURNAL, 23, Bedford Street, W.C.2. a.24

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THE SOUTH HAMPSHIRE APIARIES (Newton and Clarke) are now booking orders for Stocks, Nuclei and Queens. Best strains only bred. Speciality, 5-frame Nucleus. Honey and Wax Bought and Sold.—All communications, H. E. NEWTON, New Milton, Hants. b.39

NUCLEI.—3-frame Simmins', pure Italians or Carniolans, 40s.; Hybrids, 30s.; carriage paid; 10s. deposit on returnable box; delivery June.—HOWLETT, "Sylvabelle," Tring. r.c.7

EXCEPTIONALLY productive and healthy strain. Two stocks produced over 800 lbs. of honey in one season. 5-frame Nuclei of this strain now offered for April-May delivery at the special rate of 40s. (carriage paid), plus 10s. deposit on returnable box.—CHIVERS & SONS, LTD., Histon, Cambridge. r.c.16

COLONIAL HONEY FOR BEE-FEEDING.—Australian new white, 60-lb. tin 39s., two tins 77s.; finest West Indian, 56-lb. tin 41s. 6d., two tins 75s.; carriage paid Great Britain.—LONDON TRADING AGENCY, 32, St. Mary Axe, London, E.C.3. r.17

"DAILY MAIL" BEE HIVES, complete or in the flat.—TROY & CO., LTD., Iverson Road, Kilburn, N.W. r.c.18

HAVE YOU TRIED Cotswold Cream Candy? If not, order 10 lbs., 11s. Great seller.—BOWEN, Queen Specialist, Cheltenham. c.19

BEES.—Twenty Stocks of Italians for Sale on 8 combs, 70s. each, carriage paid; cash with order; April delivery if preferred. Wanted, Section Racks; state price. Honey for Sale in 28-lb. tins, 1s. 6d. per lb.; tins free; A1 quality.—BOOBIER, Holford, Somerset. c.23

FINEST ITALIAN NUCLEI, headed by Cannell's imported 1922 American Beauty Queens, 3-frame, 45s.; 4-frame, 55s.; carriage paid; travelling boxes returnable; satisfaction guaranteed.—HOGAN, Boxford, Suffolk. r.c.25

GRAFTON ITALIANS will give you satisfaction. Early Nuclei from £2. Fully guaranteed.—Particulars, MASOM & HEDLEY, Grafton Regis, Stony Stratford. c.28

SUCCESS!—AMBROSIAN BEES worth their weight in gold. c.32

ITALIAN and Hybrid Stocks and Nuclei for Sale, strong and healthy, delivery April, May, low prices.—DAVIDSON, Forest Road, Burton-on-Trent. c.34

STRONG, healthy Stocks Dutch Bees in skeps for Sale, delivery March, April.—DAVIDSON, Forest Road, Burton-on-Trent. c.35

SWARMS BOOKED, May delivery, Italian, Dutch, Carniolan, £1 12s. 6d.—DAVIDSON, Forest Road, Burton-on-Trent. c.36

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Reduction for further quantities.

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FAMOUS COTSWOLD QUEENS

EVERY QUEEN A BEAUTY! TO SECURE MAY-JUNE DELIVERY, BOOK NOW.

1 Queen 11/6; 3, 31/6. Art Booklet Free.

Lt. BOWEN——"B" SPECIALIST——CHELTENHAM.

ALBERT HOPKINS, Breeder, Importer best Italian Stocks, Nuclei, Queens. Satisfaction guaranteed. Prices moderate, application. 25 years' practical apicultural experience.—Woodland Valley Apiary, Lyminge, Kent. r.c.26

"MEMPHIS L."

Have your bees got "I.O.W." or Crawling? You *must* save them for the coming honey-flow. "Memphis L." already tried and *proved* by scores since our last advt., is 3s. 9d. per pot, post free. Money refunded without question if cure not *complete*. We can do no more.

THE THAMES VALLEY BEES (REGD.), TEDDINGTON.

Secretaries of County B.K.A.'s are asked to test "Memphis L" free of charge.

"MEMPHIS L."

c.22

EXCELLENT opportunity for Pupils to learn honey production on a range of apiaries; premium required.—THOMAS, Burwell, Cambs. r.c.39

FERTILE ITALIAN QUEENS, the best, April, 12s.; May, 10s. 6d.; 4, 38s.; 6, 56s.; 12, 96s. Special quotations 25 to 100 queens. Safe arrival guaranteed.—ATKINSON, Fakenham. r.c.40

"LAZENBEE" ITALIANS.—Booking now. Few choice 3-frame Nuclei, price 30s., May-June delivery.—KENDALL YOUNG, 100, Elms Apiary, Sudbury, Middlesex r.b.89

20 ITALIAN STOCKS, £4 5s. each; 17 Blacks, £3 15s.; travelling boxes 10s. extra, returnable. Guaranteed healthy on arrival. Great satisfaction given to all customers last season.—J. YOUNGER, 16, Maid's Causeway, Cambridge. r.b.74

ITALIAN HYBRIDS. Strong Stocks, 85s., March-April delivery; 3-frame Nuclei, 35s.; 4-frame, 42s.; all carriage paid; boxes 10s., returnable.—COLLINS, 45, Coronation Road, Sheerness. r.b.70

BEES, noted disease-resisting strain. Limited number of Stocks April, May, Nuclei onwards; prices moderate; orders in rotation.—SMITH, 5, Florence Terrace, Ramsgate. r.b.35

200 LBS. HONEY, 10 Stocks, from one Queen, Melton ex Simmins; proved honey producers. Queens, Stocks, Nuclei, Swarms. Book now.—MASON, Melton Apiary, Willerby, Hull. a.37

HAVE YOU READ "THE BEE WORLD"? If not, why not? Every number in itself is a useful literary work for practice and reference. Specimen copy free.—Offices: THE APIS CLUB, Port Hill House, Benson, Oxon.

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White Candy—4 lbs, **5/-** post free; 10 lbs., **11/-** post free. Glass top boxes (2 lb.), 4 lbs. **5/-** post free.

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ITALIANS.—Nuclei, 1922 Queens. 3-frame, May 40s., June 32s.; Colonies, spring delivery, 6, 8, 10 frames, 50s., 62s., 73s.; carriage paid; returnable crates.—ATKINSON, Fakenham. r.c.41

BRITISH bred Italian Nuclei and Queens. Prices on application. — CHARMAN BROTHERS, West Hill Apiary, Brookwood. r.b.4

MAY SWARMS, £1 12s. 6d., packing, carriage free; 4-frame Nuclei (May), 42s., carriage paid; boxes 8s. extra, returnable.—H. WELCH, Wickham, Hants. r.b.22

WE APPRECIATE THE MANY CONGRATULATIONS received on our enterprise in originating the giving of an absolute guarantee against Acarine disease. Our offer still holds good for all Stocks and Nuclei booked by April 5. A sporting proposition with no irritating conditions. Our Italians are the best little Bees we know, and we have failed to obtain evidence that better exist.—THE WELSH BEE GARDENS, Brecon (Lt.-Colonel Weaver Price). We Buy Bees-wax. State price. Quick payments. b.67

WICKHAM BISHOPS ASSOCIATION is now booking orders for early delivery. Prices: 5-frame Nuclei, 50s.; Stocks on 10 frames, 75s.; Swarms from 25s.—Address, BEE-KEEPERS' ASSOCIATION, Wickham Bishops, Essex. r.b.76

BUCKFAST QUEENS are the very best. 1922 Circular and Price List sent free on application.—REV. BR. ADAM, Buckfast, S. Devon. r.b.81

QUEENS by return from April till October.—PEARSON & GALE, Marlborough. w.14

JACK TICKELL.—For Queens, Stocks and Nuclei. List free. — Westbourne Apiary, Cheltenham. r.a.54

NEW HARDY YELLOW VARIETY.—No loafers hottest days. Gathered honey 1921 after all others had retired from business.—Particulars, S. SIMMINS, Queenland, Heathfield, Sussex. r.a.13

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The Bee-Keepers' Calendar.

MARCH, 1922

9 Thursday. "The whorlèd flowers, the trees,
Those bacchanals the bees
. . . . . .
Sunlight, moonlight are mine,
And the clouds crystal wine."
Clinton Scollard, "Pæan of the Hills."

10 Friday. "A green land stretching to the evening star,
Fair rivers skirted by primeval trees
And flowers hummed over by the desert bees."
J. G. Whittier, "The Panorama."

11 Saturday. "Ah! woe is mee, woe, woe is me,
Alack and welladay!
For pitty, Sir, find out that Bee
Which bore my Love away."
Herrick, "The Mad Maid's Song."

12 Sunday. "Nature is but a name for an effect
Where cause is God . . . . . .
. . . . . Not a flower
But shows some touch, in freckle, streak, or stain
Of His unrivalled pencil. He inspires
Their balmy odours and imparts their hues,
And bathes their eyes with nectar."
Cowper, "God in Nature."

13 Monday. "A Garland for my Gift shall be
Of flowers, ne'er suck't by th' theeving Bee
And all most sweet."—*Herrick, "Birth of Prince Charles."*

14 Tuesday. "He travels and expatiates, as the bee
From flow'r to flow'r, so he from land to land."
Cowper, "Sanctuary."

15 Wednesday. Choose a warm mid-day to see that every hive has a queen and stores. Give a clean floor-board.

An Explanation.

We are sorry a number of our readers have not yet received the "B.B.J." dated February 23, in some cases being told by their newsagent the paper for that date was not published.

The Journal was published as usual, but the trouble was owing to a wages dispute between some of the wholesale booksellers and newsagents and part of their staff, in which Messrs. Simpkin, Marshall, Hamilton, Kent & Co., who were our publishers, were involved. As the "B.B.J." bore their imprint, the members of the National Union of Printers and Paper-workers engaged in the warehouse at our printers and also with those wholesale newsagents not affected by the dispute, refused to handle our papers, we were even refused delivery to our office of any copies of our paper beyond the balance usually sent after filling the wholesalers' orders, although we had no part in the dispute; in fact, it had been in progress several days before we knew of it. The papers were therefore lying in the warehouse at the printer's for a week before we were able to arrange matters. The usual number of Journals were printed, and copies for February 23 and subsequent dates are now available. If any reader has difficulty in procuring copies from their newsagent they can be obtained direct from our office.

A Dorset Yarn.

"Time is one of God's loveliest creations has been misunderstood by men, who describe it as inexorable, an ally of death. In reality, time is music; a progression of harmonies based in rhythm."

Those who have to get their living from the soil will know the value of time. Those of us who keep bees will also be able to agree with the writer of the text; we realise that "time is music"

On February 25 and 27 our bees were flying fast and strong; they were on the tree heaths in great numbers, even though the south-west wind was swaying the trees about as the bees were absorbing the nectar from the flowers. To the bee-keeper the hum of his bees is always sure music, but when the "sweet south wind," as Shakespeare wrote, sways the bees about on the branches we get the "rhythm." The bee-keeper knows that "time is one of God's loveliest creations"; he knows that bees are increasing in the hive, by their strong flight towards the great flowering elms, the numbers on the crocus, their flight to the primroses in the hedgerows some distance from the hives. Some of this wild lot have been out a long time, but only this week have the bees been so far after the flowers. Time, with the Violet Farm, now is music; when the weather is fine it is ploughing and sowing; the plums have split their flower cases, the purple-leaved one is in full bloom—the flowers of this are somewhat like the cherry blossoms. All show the wonderful works of God.

At South Lychett Manor just now there are camellias of red and white, hardy cyclamen; here, time is music. Mr. Dance, the able director of these beautiful grounds, has his bees in the shelter of the walls that are planted with trained pears and plums. From the huge forest trees, the wealth of bird life (and the bright sunny day when we were there), the hum of bees, in such places as this, one gets the harmonies based on rhythm. In grounds such as this one nature is always most beautiful. Planted with the wealth of subjects from every part of the world, there is always something in blossom. Mr. Dance keeps his bees close to all these beautiful things; even time with him is music. A singer himself (his daughter has won a £100 scholarship—music), living close to the church, where he sings the beautiful music set to the Communion Service; when that is over there are the songs of birds and bees till evening services begin again; truly, here is complete happiness. After all, this is the main thing in life; money is useful, but it is not everything. This bee-keeper spent nearly five years away from home and loved ones in India during the war till he was released. He resumed his duties again in these grounds where he had worked so long; with an appreciative employer like Sir John Lees life is a very happy one.

Mrs. Dance uses honey in cakes; she knows just the right quantity to put in to make them tasty and yet not detract from the porosity. This was the first house I found that used honey largely for cakes. A friend of mine in Bournemouth during the war used honey for making cream ices; these were delightful to the palate; the light coloured honeys were best—but I am getting away from the text. "Time is music;" bees are out when sun shines after rains in great numbers; it is difficult to see where they go, but the gorse has a great many of them; they come back to the hives covered with yellow, as if they had been in vegetable marrow flowers. The loud song of so many flying round adds music to the life of the bee-keeper It is very beautiful just now to see the trees in damp woods; by the brooks and streams the catkins of alders seem to be all shades of brown; it must be the age of the flowers that makes such variation. Then the sulphur yellow catkins of hazels, and the light opening inflorescences of willows, all swaying with the wind; birds and bees making music; the time seems to be all rhythm; the nature lover can realise that "time is one of God's loveliest creations."—J. J. KETTLE.

Jottings from Huntingdonshire

Crocuses are a very welcome flower in February and March, they not only yield pollen but their very shape enables one to fill their flowers with peaflour, which the bees eagerly clear away. It is worthy of note that in the churchyard where crocuses have been planted on graves, they have blossomed a full ten days earlier than those in the most sheltered spots of our gardens. It would appear that deep trenching is as good for crocuses as for many another bulbous plant. The wealth of hazel catkins are a great asset to the active bees. The sallow catkins will be ready to follow in their train, and a succession of pabulum is fairly well assured. All we want now is the right kind of weather to set the bees going at fever pitch (not quite literally, of course, we are not contemplating swarming fever in March).

Mr. Kettle was in happy mood last week. I don't think, much as I enjoy his Dorset yarns I ever appreciated the work of his pen as much as his last contribution. Singularly he answers a question of mine in the same issue. That both minds were working in the same direction is noteworthy, but quite a coincidence. Of course, someone must rush in and say that we have been colloquising again as if it were impossible for two minds to think alike without previous collaboration. I have not seen Mr. Kettle for nearly two months, and our short conversation, if I remember rightly, was on the subject of currant bushes affected with big bud, and certainly not about oaks, and that's that.

Congratulations to the Editors for giving us the unedited letters of Francois Huber. His very name written or spoken awakens memories of younger days. It was reading his life that gave me my greatest desire to observe closely every action of the honey bee. "As long as she lived I was not sensible of the misfortune of being blind." So he wrote of his wife in describing how he made many of his discoveries by using the eyes of others. Becoming blind at the age of seventeen, Huber was able to recall more things he had observed in his days of sight than many people observe in a lifetime. Was it not he who, with Swammerdam, killed the belief that bees became torpid in winter. He and his talented son made the world the better for their having lived in it. I often, in fancy, see the old blind man sitting out in the open with the woman he loved so much, describing the whole scene to him. The flowers scattered at their feet, which were, and which were not visited by the bees. The bushes are blooming, he scents them and asks. "Any bees there, my dear, ah! I hear them, tell me, is not one which has just flown by collecting pollen?" At another time he has a hive standing on a sheet of glass, with three windows in either side. His wife and Burnens are watching and describing the individuality of the bees. Nurse bees—wax makers—methods bees have of varnishing, all were noted. Some of his conclusions are final, some are not. Could he return to earth again he would say to us: "Be observant brothers, be observant and date your discoveries."

This reminds me, I must make a note of a wonderful week of growth in the world of nature. A south-west gale, with squally showers, has been the order for a week, and yet things have grown at an amazing pace. Primroses have shot forth in myriads, daffodils have followed suit, the fields are changed from brown to green, and the whole order of trees and plants are pointing towards a greatly hastening spring.—E. F. Hemming, Steeple Gidding.

Clippings from Clay Cross.

I have read with much interest the detailed instructions for the assistance of amateur bee-keepers in the construction of their own hives which have appeared in your columns from the pen of Rev. E. F. Hemming. But I find that I must differ from him on one or two points, which I consider to be of some importance.

For instance, he recommends boards 12 in. wide being used for the hive body, and this I maintain is unnecessary both in practice and in costliness. Boards 11 in. wide are a standard stock size in the timber trade, and are thus easily obtained, whereas if you asked for boards 12 in. wide you would probable have to get them sawn specially out of a log, with time lost in waiting for this, plus extra cost in price.

I would say further, *don't* employ the two 6-in. grooved and tongued boards as a substitute for the 12 in. as suggested, as the joint thus incurred, however well made by an expert joiner, is sure to prove a weak place sooner or later owing to varying atmospheric conditions causing alternate expansion and contraction of the wood. Speaking of grooved and tongued boards implies machine work in preparation, and involves (as per Rev. H.) filling the groove at the lower edge with putty or white lead, and also planing off the surplus tongue at the top edge. All this involves unnecessary waste of material and labour without any equivalent result in efficiency. Rev. H. appears to ignore capillary attraction, but it is, notwithstanding, one of nature's silent forces to be reckoned with, even in bee-keeping. Rain is rain only while in the act of falling, after which, whether it rests on a horizontal or a vertical, or in fact any surface, it is then merely moisture but will penetrate through the smallest possible crevice in any direction up, down or sideways, without the assistance of wind at all. Any reader may provide himself with an illustration of this by suspending a large and absolutely dry sponge over a bowl of water, so that the lower portion is in the water to the depth of a quarter of an inch only, and in a few seconds he will find that the top of the sponge is as wet as any other part, thus showing what capillary attraction will do without assistance from any other power.

I have a further objection to any unnecessarily deep boards for hive sides, as when the upper edge of these extend so much above the level of the top of the frames it is difficult

cult to get a firm thumb and finger grip of the frame ends for manipulation purposes.

Finally, to amateur hive builders my advice is, use 11-in. boards, as being more readily obtained and more economical, and thus avoiding any horizontal joints.

Trials and Troubles of a Bee-keeper (January 19, page 21).—I am sure all bee-keepers will not only sympathise with Mr. Tyler Taylor in his trying experiences, but also admire his courage in screwing himself up to the "sticking point" necessary in order to confront such a desperate situation. It was very kind of him to tell us that his narrative was somewhat exaggerated, but as it proved that bit of information was entirely unnecessary. I am afraid Mr. T. T. has told us more than he intended, especially to those who now and then read between the lines. Fancy! such an intelligent creature as a bee mistaking his upper lip for an alighting board and the orifice of one nostril to be the entrance to a modern hive! No wonder at the difficulty experienced in threading his way between the intricate branches of the apple tree as described, or at the veil being torn. It is very evident from his own showing that nature never intended Mr. T. T. for a bee-keeper, any more than she intended him to be a successful serio-comic writer of storyettes for a weekly journal. But what a peculiar apple tree, with its horizontal branches at the extreme top of the tree, so different to any of mine.

Mr. Tom Sleight's Rambles.—I am always interested in and much enjoy reading the above, and though I have known Mr. S. a number of years, I really seem to have learned more about him through the medium of his pen than ever I had done by social intercourse. To a certain extent I can participate in imagination in his rambles, or rather "rides," when he is dealing with ground with which I am, and have long been, familiar, but as I am only a humble pedestrian, and he travels "awheel," I am soon left far behind, especially when he crosses the border into Nottinghamshire. Being an ardent lover of nature myself, I much appreciate his references to the scenery around him for the time being, for whatever he sees of the charms of nature, he not only sees it with the eye of an artist, but he describes it with the grace and felicity which a poet might envy him. As Paddy would say, "More power to him."—GEO. GRIFFIN, Parkside, Clay Cross. February 4, 1922.

North Cheshire Chat.

In the issue for February 16 the Editor recommends flour candy now. I think readers in the North had better go slowly with that food until nearer the middle of this month, as the weather is yet much against bees getting the necessary cleansing flights, which are imperative when flour candy is being consumed. It is all right for the South. [We quite agree. We are apt to forget that further north climatic conditions are different to our own.—EDS.]

Friend Kettle's panacea for most of our ills is a bit of land, some bees, a cow, and on occasion, pigs. Grow fruit and flowers for market, and produce honey in abundance. One is inclined to agree with him up to a point; but the individual who takes up land must be prepared to work hard and not study hours of labour. Many artisans from towns have tried, and failed, generally because they could not adapt themselves to the idea of working an indefinite number of hours. After working eight hours or so, and having Saturday afternoon and Sunday quite free; to have to work more or less on seven days a week did not appeal to them, and they retired in disgust. Notwithstanding, there are plenty of men (mostly brought up in the country), who have the necessary ability, and who would be delighted at the chance of making their own living of the proverbial "three acres and a cow," but who lack either the necessary capital to start or who, having the capital, lack the land.

When we were demobilised in 1918 we were presented with a green pamphlet, setting forth various Government schemes for settlement of ex-service men upon the land, and told to make application to our County Council for particulars. Having done so, we received a form to fill up, in which we were invited to set forth our requirements. We were told that schemes had been prepared, so that applicants could have two acres of land with a cottage on it, the idea being that such holding was a spare time occupation, occupier working for wages, either for the Council, or farmers in the neighbourhood. Or if a man had a little capital any amount of land up to 50 acres would be available. Those of us of perforce modest requirements sent in our application for the cottage and two acres. This was acknowledged and an intimation sent that land would not be available until February, 1921. We tried to possess our souls in patience. In January came the information that owing to the great cost of building it had been decided not to build any more cottages, but adapt the existing farm buildings, on the purchased farms, to accommodate three or four families, each having from 50 to 100 acres of land attached. We consider the County Council let us down badly. Where there are half-a-dozen who could take fifty acres, there are dozens who would have been glad of the two acres, and who would, like friend Kettle have worked them up to fifty or more perchance in a few years. This is only "Bee Chat" in the sense that many of these prospective smallholders would have made bees a not inconsiderable addition to the source of income.

In my recent article on "Wildflowers," two rather important omissions have been pointed out to me, viz., holly and box, both of which are loved by bees, and yield early supplies of pabulum in the districts where they are indigenous.

I agree that we bee-keepers ought to rouse ourselves, and compel the powers that be to pass a law that all honey sold should be marked with the country of origin, so that consumers would know what they were paying for (*vide* Labelling Honey, Par. 10,631). —D. J. HEMMING, Appleton, Warrington.

Notes from Gretna Green.

March has come in lamb-like, and the hum of flying bees is heard in the land.

Acarine disease is still in evidence, so it was gratifying to find that my apiary, stocks and nuclei alike, had come through without loss, several colonies being particularly forward, judging by the great warmth of their quilting.

There is an entire absence of dysenteric conditions, and I credit this to my colonies being wintered on combs of ripe clover honey stored up in a hive set aside for that purpose last summer. Full depth supers of sealed honey were placed on strong colonies in autumn, and will remain on until the next honey flow is at hand. Before supering with sections, the colony is reduced to a single storey on ten selected combs, and the remainder with other spare brood combs again piled up six or seven tiers high on a storage colony.

Sub-division of work is as desirable in the apiary as in the individual hive, consequently section supered colonies should be induced to store all their honey in the sections, and in return be supplied with combs of thoroughly ripened sealed stores from other colonies supered with that end in view.

This applies particularly to heather districts, where in the mutual interests of bees and bee-keepers it is advisable to reverse the usual procedure of clover-filled sections, and brood combs, blocked with heather honey

The latter familiar problem is possibly soluble along the lines of dual queen working in the vertically divided "Atkinson" brood chambers, and experiments here last August showed the value of a supplementary queen in reducing brood-nest storage to a matter of ounces.

Perhaps Mr. Atkinson might give us an article on the dual-colony and "double-six" methods.

I am pleased to hear that Mr. S. H. Smith will, in future, be a contributor to these columns, and consider this a step in the right direction.—J. M. Ellis, March 4.

North Hampshire Notes.

By W. B. Cobbett.

An extract from the *Cottager's Monthly Visitor* for May, 1840.

"My Dear Friends,—There are few things that look prettier in a cottage garden than a neat row of beehives; and those who keep bees have certainly a great addition to their innocent pleasures, as well as some profit in money at the summer's end. I have heard of a poor widow who used to pay her rent every year with what she got by her beehives: and if it is but a few shillings that you can get, that is much better than nothing, and comes in very conveniently to buy shoes or coal for the winter. Besides, whatever your bees produce, whether more or less, it is all clear gain, and costs you no labour or pains. They are working hard for you without hindering you from working for yourselves; and, indeed, it is a pleasant and useful lesson to see how these little creatures employ every half hour of sunshine and never *lose* a minute when they can use it.

"But I am now going to tell you about a way of managing bees by which you may get much more profit as well as pleasure from them than you can by the common plan. And, besides this, in the new way you need not *kill* your bees to get honey. You must feel very sorry I am sure, to smoke and burn your poor little industrious labourers after they have been working so hard for you all the summer; and I dare say you will be very glad to hear that there is an easy way of saving their lives and having them work for you all the next summer, too. Killing the bees is very *wasteful* as well as cruel; for the bees which you destroy are often worth as much as the honey and wax which you get, and sometimes much more.

"Well, then, if you are willing to try, you must get everything ready before the time of swarming; and with a very little attention and trouble, I think you will succeed in saving your bees and getting more honey from them, and better honey, too.

What Sort of Hive You Must Have.

"First of all, get a clever hive-maker to make you a hive, not like the common ones, but in the shape of a hat without a brim, and with a flat top. This top must be made of wood; deal boards are the best, but any other wood will do. Fasten the top down to the hive with pegs or nails, but be sure you make it fast. In this flat wooden top you must cut two or three holes as large as will let your two fingers through. Make the holes round, and get some corks or bungs to stop them when they are not wanted to be open.

"Next you must have another hive made to put upon the top of the flat one. The best shape is with the sides straight, and the top pointed. Cut a little window in the side of it, and fix a piece of glass into the window with putty; you must also make a cover with a bit of thin board or tin, which should be hung over the window by a nail fixed above it, in the side of the hive, so that you can turn it aside when you want to look into the hive. By means of this window you will be able to see the bees at work and to find out when the hive is full of honey. This pointed hive is to be set on top of the flat one, so that when the bees have filled the lower hive with combs they may go up through the holes in the lid and work into the upper one.

How to Use the Two Hives.

"Suppose, then, that you have got your two hives made; I will now tell you how to use them. Have the flat-topped hive ready for the first swarm you can get, and keep the holes stopped with the bungs. When the swarm comes out hive it into this flat-topped hive, and fix the hive on a stool as usual. In about ten or twelve days the bees will have filled it with comb, and it is then time to put the other hive on the top. Take out the bungs from the lid, and set the pointed hive on the top of the other so as to cover all the holes. Then fasten it down to the lower hive with a little cement or mortar or

drive a nail or two lightly through the lower row of the straw into the wooden top. This will keep it more secure from winds and from thieves, but do not drive the nails in too hard as you will have to pull them out again by and by.

"Another time I will tell you how to take the honey out of the upper hive without killing the bees, and now I will tell you *why this way of keeping bees is better than the common way*:

"1, Because you do not need *kill* the bees.

"2, Because you will get *better honey* and *more* of it

"3, Because your stocks will be *stronger* and much less likely to die of *cold* or *damp* in the winter.

"4, Because you will be able to *feed* them in all weathers, and with better food, and so keep them from dying of *hunger*.

"5, Because your stocks being strong and forward in spring will be likely to give you *earlier* and *larger* swarms.

"These are five good reasons; and, besides these, you will have the pleasure of seeing the bees work whenever you choose to watch them.

"All these points I hope to explain to you in another letter by and by; meanwhile, *get your hives ready*.—Your sincere friend,

"A BEE-KEEPER."

Bee Keeping in Rhodesia.

About twelve months ago a swarm of bees clustered on a Cypress tree near my house. The sight of those bees awoke a latent love which I first experienced about 30 years ago when a lad in the North of Scotland, where my old dad kept bees as a hobby. I boxed those bees; they stayed in their rough home and prospered. Getting thoroughly interested, I kept my eyes and ears open and learned that the district abounded in bees living in rocks, trees, wood and iron houses, etc., etc. The country round about is a mass of bush, shrub, veldt, trees, gum, and silver oak trees, and it occurred to me that those bees would not be in such numbers if there were not sufficient nourishment to be had. On inquiry I found a gentleman who had about 100 hives lying idle. I called on him and I bought his whole output for a song. The "outfit" included 95 Danzenbaker hive bodies, 200 supers, each taking 32 5 by 4 sections 40 super single covers, 30 sheets mounted queen excluders, 40 hive bottom boards a dozen gable covers, part of a queen-rearing outfit, about 60 sets brood chamber frames, section frames, and separators, etc., etc.—a bargain, to be sure!

After hives were thoroughly cleaned I purchased brood foundation for about a dozen hives and stacked them—the hives—in tiers in the garden, with the "decoy" hives on top. Then the fun started, and the bees began to teach me. Scarcely had the tiers been completed when scouts began investigating, and in three months I had no less than 12 colonies of bees working away as for dear life in 12 Danzenbaker hives, complete with supers and sections. This season's honey flow is just commencing, and one of my hives—No. 5—has its third super all drawn out! Section honey sells here at 2s. 6d. per section. Within this last week two swarms have taken possession of decoy hives, and look very promising. The second swarm arrived in this fashion. About 3 o'clock one afternoon I noticed scouts entering and investigating a decoy hive. They were still there at sundown, and again at sunrise following morning. At 11 a.m. I had the exquisite experience of seeing a swarm arrive and enter. In about 10 minutes the hive was placed on its permanent stand. At 11.30 a.m.—half an hour afterwards—another swarm arrived, but instead of settling kept on the wing round the tiers of hives for about a quarter of an hour. As they seemed to be getting angry my wife suggested that they had no queen, but this I pooh-poohed as ridiculous. Ultimately I got them into a hive, but in about a minute they were out again clustering in about half a dozen different places. The suggestion that the swarm was queenless was again made, whereupon I had the 11 o'clock swarm brought back and placed close to the largest of the clusters. In five minutes all the bees had entered the first hive, which was then replaced on its stand, and the colony is now working so hard that the full-sized entrance seems scarcely large enough! Up to the present I have taken no honey from the bees. The first lot of sections I shall uncap and use as baits for next season, as these bees do not enter the supers readily.

Our Rhodesian bees appear similar to the bees we kept in the North of Scotland—Ross-shire. They are, however, very vicious, and can only be manipulated about sundown. Smoke seems to have little or no effect on them, and with the slightest tampering during the day they come out in hundreds and sting everything and everybody within a radius of half a mile.* They swarm without clustering. They are excellent protectors of their hive and good honey-gatherers. There is no bee disease of any kind in Rhodesia, for which we should be very grateful. When the present laws prohibiting import of queens, wax, etc., are withdrawn I, for one, am going to introduce good-strain queens into my apiary, and hope to be able to report, "some day," that bee-keeping *does* pay.

A few weeks ago I commenced reading your Journal, which I find very interesting on the whole. Being Scotch, I do not like paying over-value, and right here I would like to mention that some of your contributors appear to think that the "B.B.J." is a "ramblers' club magazine" instead of a paper *devoted* to the bee-keeping industry.

One thing more; may I ask that if it is decided to issue a "Brotherhood of Bees" badge you will arrange that Colonial bee-keepers can become honorary holders of a badge on payment of, say one guinea a year? When I cross the briny to see my friends in Buckinghamshire and the far North it

* This is why the original owner of my hives gave up bee-keeping.

would be nice to be introduced automatically to bee-keepers.

If you think this short paper interesting enough to print in your Journal I will send you further jottings from time to time, when I hope to report progress and prosperity in my little wigwam.—J. W. Ross.

January 5, 1922.

Packing Bees and Ventilation.

This subject was brought to my notice very forcibly during the past summer season. A farmer friend of mine told me he was buying a stock of bees from an advertiser in a local paper, and he would be receiving them on the next day or so. I heard nothing for a few days, and, on making inquiry, was told that they duly arrived, but were suffocated in transit—a rail journey of 10 miles or less. It brought home to me strongly how easy it was to keep bees, and yet be quite ignorant as to how much ventilation they require when one has to close them up to convey them even a few miles. The closing of their entrance is at once annoying to them, and they immediately become excited, and unless sufficient ventilation has been provided, harm is done which may mean the death of the stock. Only once do I remember a stock being lost in this way going to the moors for the heather, and it is a very serious lesson to a bee-keeper. Once in my experience I had a swarm sent to me in a skep, and so securely and superabundantly had it been tied up in canvas that it was very nearly finished off. Well do I remember throwing the swarm out in front of the hive it was to occupy, and allowed it to take its own time to enter. Thus it was saved with a few casualties. But the most remarkable, and yet pathetic, experience that I have ever come across happened to a clergyman I was in the habit of assisting with his bees. His usual practice was to call upon me and report he had a swarm, and would I call round in the evening and give a helping hand, to which I generally agreed. This day he reported a swarm, and I promised again. He added, on leaving, that he had made this one secure this time. Previous to this he had lost a swarm or two, "decamping" and leaving no address. So he had in this case "made siccar," as when the swarm was settled in the skep he packed it up and put it away in his cellar. On hearing this, I remarked, "I hope you have given plenty of ventilation," and he replied, "Oh, yes." In the evening, when everything was ready, we went for the bees. To our horror, there was not one alive. All suffocated.

Cases of this kind may be very rare, but it just shows what want of thought may do. Despite all warnings and instructions in our guide books and bee papers, bee-keepers without thought may do these things. It is safe to say that when a stock of bees has to be moved in their hive in hot weather, besides closing the entrance with perforated zinc, some sort of ventilation must also be provided over the frames. If the stock has no super on, a very good plan is to put on an empty section rack without sections, and cover with cheese cloth only, or thin, open muslin, tucked down over edges and made tight and bee-proof by packing the edges between the rack and the hive sides, thus giving at least 4½ in. clear space over frames. If swarms or stocks are moved in skeps, cheese-cloth covering over the mouth of the skep is all that must be put on, and the skep must travel *mouth upward*. Where travelling crates are used, all necessary ventilation has been taken into consideration in their construction. I have only in mind those who have none of these things, and who only use the ordinary appliances of the small apiary for all these purposes.

"AYRSHIRE."

Acarine Disease.

In view of the results of investigations by able scientists, which have been published from time to time, is it not a mistake to call this a "disease"?

The most noticeable symptom is "crawling," the reason for which is the bee cannot fill the large tracheal bags, a condition necessary to enable the bee to fly. The cause of the bee's inability to fill these tracheal bags is the blockage, by a minute mite, of the spiracles and trachea or breathing tubes through which the bee fills these tracheal bags. Is it not, therefore, suffocation or asphyxia from which the bee suffers when *infested* by acari?

As a healthy bee can only void its excrement while in flight, the effect of restricted breathing, or suffocation, is the accumulation of fæces in the bowels; the effect of the mite is two-fold.

It is at the opening of the hive that the bee fills its tracheal bags through the spiracles, conversely, on returning to the hive, or rather just before alighting, at the same place the bee expels the air. Also the bee, in alighting on a flower to gather nectar or pollen, expels air, and in rising again fills the tracheal bags.

Bee-keepers will realise how many chances a bee *infested* with acari has to disseminate the mite in blossoms, and how many chances a healthy bee has of picking up one or more of these mites. It is a well-known fact that a bee from one apiary or hive, if laden with honey or pollen, will be welcomed in another apiary or hive. The writer has noted repeatedly last season many Italians, while in the late autumn no Italians were to be seen. Acari infested some adjacent apiaries, although the prompt action of the owners checked the spread of the mite. The writer's bees were not infested, and at the end of January were strong colonies. No precautions were taken, although a strict look-out was kept all season, with Flavine and a spray ready for use at a moment's notice.

Is this one up to the native bee?

The efficiency of the acari antidote—inimical to the mite but not to the bee—would be

greatly increased if used on the hive entrance board where the bee starts and finishes its flight. An "entrance mat," made of a piece of cheese cloth, linen, or very thin felt (any old rag), stretched on the alighting board could be sprayed when required—every morning, and in hot weather several times a day—if there is any suspicion of the presence of the mite.

This method of application could be recommended for the following reasons :—

1. The bee would, when charging its tracheal bags, take in some of the evaporating antidote, so reducing its suitability to accommodate the mite, should the bee visit a flower having a waiting mite.

2. A bee may return laden with nectar or pollen, and perhaps dropping a mite, which would therefore be deposited in the antidote and become inert.

3. The ventilating bees would draw in the evaporating antidote along with the air for the ventilation of the hive, thus ensuring the whole of the hive being rendered untenable so far as the mite is concerned.

4. The entrance mat can be fixed after the bees have ceased flying for the day, and the spraying done with the least possible disturbance of the hive.

5. The small cost, ease of manipulation, and absolute simplicity would deter no bee-keeper worthy of the name from carrying it out effectively.

6. *Every hive should be so treated for one season.*

It is so simple and inexpensive, that legislation through the Board of Agriculture might be brought to bear on the selfish and careless, and so rid British bee-keepers of this scourge which has wrought such havoc amongst bees in this country.

We have already legislation for cattle, sheep and swine disease, why should we not have it for bees?

Bees are certainly more numerous than any of these animals!

DAVID LANDALE.

Gowrie House, Kirkcaldy.

Some Lines About Carniolan Alpine Bees and Queens.

By JAN STRGAR.

Carniolan Alpine bees and queens, of world-wide fame before the war, could not be exported during the war from their mother country. But now, since they are obtainable once more, they have found their way again to all parts of the world in spite of other races having been able to push Carniolans back during the years of war time, when they could not be exported.

There must, indeed, be some reason for this fact, and there cannot be another one, only the unsurpassed inborn qualities of the pure Carniolan Alpine bees, which have saved them their numerous admirers and friends all over the world.

Do you know these qualities? If not, read the following lines, and you will know why so many practical bee-keepers all over the world appreciate them.

The Carniolan Alpine bees are the gentlest of all bees, and no smoke is necessary when working with them. Bee veils, gloves, etc., in Carniola are not used. It often happens that a swarm of Carniolan bees alight on the bare arm of the bee-keeper, the latter not being stung by a single bee. With bare hands Carniolan bee-keepers often brush the swarms into the basket.

Carniolan Alpine bees are the most industrious honey-gatherers, so that they gather proportionately more honey per colony than other races.

Carniolan Alpine bees stand unrivalled for an amazing prolificacy. It has been found out by Mr. Gerstung, expert and writer on apiculture, that the maximum daily egg production of a pure Carniolan Alpine queen can be 4,000! Yes, the Carniolan Alpine bees are undoubtedly the most prolific breeders, passing easily through the most severe winters, and in spring building up rapidly.

The Carniolan bee is known as a swarming bee. This could imply that she is not desirable. Allow me to remark here that the Carniolan bees are only inclined to excessive swarming as long as they are kept in small hives. As soon as they are transferred to hives that can be enlarged (Dadant), giving the queen room to satisfy her breeding capacity, they lose their inclination for swarming without losing prolificness—and you have regulated the swarming tendency of this race of bees like a clock can be regulated by an expert. You must only understand the characteristics of these bees.

Carniolan Alpine bees stand unrivalled also for resistance to any kind of diseases that bees are liable to contract in any climate or condition (foul-brood, Acarine and Nosema diseases) through their prolificacy and their inborn hardiness.

Carniolan Alpine bees, especially those of Upper Carniola, are the hardiest of all races of bees, and can stand at least two degrees more cold than yellow or black bees. Whence this hardiness? You will understand it, by being informed about the local conditions of the home of Carniolan Alpine bees. Their home is *Upper Carniola*. This part of Carniola, where I have established my apiaries is about 4,000 ft. above the sea-level, among the highest mountains in the Julian Alps. The glaciers of peak "Triglav" are only a couple of thousand feet above my apiaries. In the earliest spring (and even in February) the industrious gray workers begin, exposed to the biting winds and stinging frosts of the glaciers, to search the highest peak after flowers and blossoms that the weak rays of the sun of this season have called from the clefts and crevices of the barren mountain sides. The unfavourable location, the rarity of the nectar-bearing blossoms, the long way of ascent and descent in the teeth of inclement elements, have steeled their body, sharpened their honey-

finding instinct, and developed the grim determination and undaunted perseverance to get the nectar even from plants, the blossoms of which refuse to yield the same to other races of bees that have been bred and reared amidst more comfortable physical environments.

All these high unsurpassed qualities, the immense prolificacy, the wonderful gentleness, industry, vitality, the unsurpassed hardiness of the pure-blooded Carniolan Alpine bees, acquired in their mother country, once known, make this race of bees the greatest favourite among all others.

The Carniolan Alpine queens, exported now again to all parts of the world, are not artificially reared, as it has been found that 60 per cent. of artificially reared queens, after two years' time lose their prolificacy.

Let me mention here that, at the time of swarming, 15 to 20 queen cells in a colony can be found. Pure-blooded Carniolan Alpine queens, reared in full colonies in the ozonic, prickling air, amid glaciers and snow-capped peaks, are healthy, hardy and prolific even from 4 to 5 years. By introducing such a one in your colonies you need not fear the bad consequences of inbreeding, or consanguinity, but by introducing fresh blood into your colonies you can do them the utmost possible advantage, and for yourself it will be an investment of capital of the best possibility.

Testimonial to Mr. T. W. Cowan.

Further subscriptions as follows have been received :—

	£	s.	d.
Amount acknowledged	12	19	6
Waldock, E.G.	0	5	0
Stubbs, H.	0	2	6
Blandford and Sturminster B.K.A.	0	10	0
Flower, Miss A. B.	0	5	0
Hereford B.K.A.	1	1	0
Twickenham and Thames Valley B.K.A.	0	10	6
Bucks B.K.A.	3	3	0
Sheffield and District B.K.A.	1	0	0
Sander, G. H.	0	10	0
Walker, E.	0	5	0
Howard, F. P.	0	5	0
Richards, A.	0	10	6
Watts, F. W.	0	2	6
Eales, C. L. M.	1	1	0
New Forest B.K.A.	1	1	6
Walker, Col. H. J. O.	1	1	0
Derbyshire B.K.A.	1	1	0
	£25	14	0

As it is proposed to present the testimonial to Mr. Cowan at the annual meeting this month, those who wish to subscribe should do so without delay.

Cotswold Notes.

In view of the fact that a certain amount of old honey will be retained for the early summer shows by intending exhibitors and others a few remarks on honey storage may be timely, especially to young hands.

Frequently excellent honey is spoilt by being kept in damp and unsavoury places, and especially does this apply to comb honey.

Extracted honey in bulk if thoroughly ripe should keep for any length of time, and, indeed, rather improves with age than otherwise.

The cupboard of a warm kitchen or upper room against the inner and dry wall would be ideal.

For sections there are many worse receptacles than the familiar grocer's biscuit-tin capable of holding sixteen each.

In these, the honey will keep beautifully clear for a long time if need be.

Recently a friend was buying some sections, and without seeing them.

As they were intended for a dealer I advised him to examine them, which he did, finding them stored in a larder which was damp and smelt of cheese and onions! The consequence was that they were "weeping" badly and quite unsaleable as far as appearance went. Now, if these sections had been placed in tins and stored in the bee-man's kitchen they would have remained clean and dry for any length of time.

Grocers make a mistake when they expose comb honey in the shop or warehouse unprotected.

Shop smells are quickly absorbed, and the cost of a neat section case is, after all, only trifling. To revert: Extracted honey possesses excellent preservative qualities. When extracting during the summer wasps frequently fell down the stream of honey into the cans below.

Just recently when removing them from the hard surface they were found fully as bright as the day they fell in!—A. H. Bowen.

Questions, &c, for Bee-Keepers for Self-Examination.

633. When sugar is to be used for feeding, what kind should be chosen, and how should it be prepared or given to the bees?

634. In what circumstances is it advisable to unite colonies in the early part of the year?

635. Specify the advantages and disadvantages which arise from (1) natural, and (2) artificial swarming.

636. What is the weight of a gallon of honey, and how does temperature affect the weight per gallon?

637. How can colonies of bees be prepared so as to ensure that the blossoms on fruit trees in the vicinity shall be well pollinated?

638. Compare the hiving of a swarm on frames of foundation with hiving it on frames of empty comb.

J. L. B

Cornwall County Bee-Keepers' Association.

ANNUAL MEETING

The annual meeting of the above was held at Truro on Saturday, the 18th inst., Ingeborg Lady Molesworth St. Aubyn being in the chair. Others present were: Miss A. Buck, Revs. J. H. Beecroft, E. J. Edmunds and W. J. Haydon, Messrs. W. E. Bunney, J. M. Best, A. D. Bennett, C. Harrison, A. F. Knight, W. Sweet, C. Williams and Capt. J. S. Webb The reports of the following were taken and approved :—

C.B.K.A. Secretary's report.

C.B.K.A. Treasurer's report.

Re-stocking Scheme Secretary's report.

Re stocking Scheme Treasurer's report.

Officers elected for ensuing year as follows :—

President.—Ingeborg Lady Molesworth St. Aubyn.

Vice-Presidents.—Mesdames Thynne, H. H. Williams and Tomm, Rev. J. H. Beecroft, Sir Arthur May, K.C., W. L. Fox, Esq., W. F. Elkington, Esq., Capt. J. S. Webb and Major Baldwin.

Council.—Chairman, Rev. J. H. Beecroft, Miss A. Buck, F. Roseveare, A. F. Knight, C. Harrison, W. Sweet, Capt. Loam, J. M. Best, C. Williams, W. T. Haydon, W. E. Bunney, and E. J. Edmunds.

Hon. Treasurer.—Capt. J. Stanley Webb (Truro).

Hon. Secretary. — Mr. C. Harrison (Liskeard).

Hon. Secretary and Treasurer of Re-stocking Scheme. — Mr. W. F. Knight (Truro).

Press Secretary.—Mr. A. D. Bennett (Illogan).

Hon. Auditor. — Mr. W. E. Grenfell (Truro).

Lady Molesworth St. Aubyn, who was elected president of the Association for the second year, said the Association was to be congratulated on being largely instrumental in saving the ancient and valuable industry of bee-keeping in Cornwall. If they worked together they could achieve much success in the production of home-produced honey. It grieved her to see the vast amount of money going out of the country for foreign honey of inferior quality to our own, whereas we should be in a position to supply our own markets and even to export. Cornish honey had no superior.

Mr. W. E. Bunney, the retiring Secretary, was heartily thanked for the magnificent work he had done in building up the Association, and by the unanimous vote of the meeting he was elected a life member of the Association. Mr. Bunney suitably replied.

Her Ladyship (Lady Molesworth St. Aubyn) hereabout presented four members with the Preliminary Certificate of the B.B.K.A., the recipients being Messrs. Beecroft, Edmunds, Harrison and Knight.

The fine nuclei which are bred at the St Allen and St. Austell apiaries (under the management of the Rev. E. J. Edmunds and J. M. Best) are in demand as far north as Scotland and Wales. The report shows that some of the diseased areas are now answering "All well," whilst others have been blotted right out. The latter are greatly to be deplored, but these unfortunate bee-keepers have one solace, i.e., they can re-stock by purchasing nuclei from the re-stocking scheme.

The past season throughout the county has been exceedingly good, large takes of excellent honey having been taken, and swarms fairly numerous. Instead of having one expert for the whole county we have appointed as far as possible a "Local Adviser" to each district.

This has been a huge success, the advisers having done an enormous amount of splendid work, and in most cases gratuitously.

We are greatly indebted to Mr. C. Harrison, who has favoured the Association by his many microscopical examinations of diseased bees, a privilege not often enjoyed by other associations, and we value him accordingly.

The prospects for the coming season throughout the county are exceedingly rosy.

A. D. BENNETT (Press Secretary),
Illogan.

Wickham Bishops and District Bee-Keepers' Association.

An interesting and instructive lecture on "Bees and Bee-Keeping" was given at the Council Schools, Great Totham, on February 10, by Mr. A. C. Tew, of Tiptree, illustrated by splendid lantern slides. The lecture was arranged by Mr. T. Hammond, bee expert, on behalf of the Wickham Bishops and District Bee-Keepers' Association. Rev. Canon Pelly, Hon. Secretary of the Association, gave a brief outline of the progress and purpose of the Association. The chair was taken by A. Heygate Mackmurdo, Esq., who also spoke on the usefulness of bees.

The Cardigan and District Bee-Keepers' Association.

ANNUAL MEETING.

The third annual meeting of the Cardigan and District B.K.A. was held on February 8, 1922, at the Central Restaurant, Cardigan. The chair was taken at 3 p.m. by the Rev J. G. Hughes, and the company present included the President (Mrs. Saunders Davies) and Lady Webley-Parry-Pryse, one of the Vice-Presidents of the Association.

After the correspondence and minutes had been dealt with, the financial statement was read, showing a small balance on the "right side" after the year's working. The Secretary's report dealt briefly with the various activities of the year and showed a very healthy state of affairs in regard to membership, finance and general working of the Association. Discussion on the points of the report centred chiefly round the subject of providing a honey market for members' surplus. It was, at length, agreed that owing to the risks and uncertainties involved, the Association, whilst doing all in their power to secure

a market, could not be expected to undertake any responsibility in the matter.

After the unanimous thanks of the meeting had been tendered to all retiring officers for their services, the officers and committee were elected for 1922. The following resolution was carried unanimously, and a copy directed to be sent to the Board of Trade: "That all imported honey exposed or offered for sale in this country should bear a label or other device indicating the country of origin."

After a hearty vote of thanks to the Chairman for the genial and excellent manner in which he had conducted the meeting, the President kindly invited all present to partake of tea, during which an animated discussion on "Bee Diseases and Their Cure" was carried on.

Later the same evening, Dan Williams, Esq., B.Sc., lectured on "Bees and Bee-Keeping" to a small but enthusiastic audience in the Guildhall, Cardigan. The lecture was illustrated and emphasised by an excellent series of lantern slides.

By common consent the day's meetings were declared to be the most successful held so far in the history of the Association. W. M. H. Williams, Hon. Secretary.

Manchester and District Bee-Keepers' Association.

Annual Meeting.

The annual general business meeting was held in the Milton Hall, Deansgate, on Tuesday, February 7.

The President sent an apology for his absence. He had not been well for about ten days, and we must remember that it was a long time since 1842.

Mr. Davenhill occupied the chair.

The minutes of the last annual meeting and of the last committee meeting were read and adopted.

The Treasurer (Mr. Mason) presented his financial statement, which had been duly audited and all demands on the treasury had been fully met, while he had still a balance to pass on to the new season of £1 2s. 10½d.

The Secretary read his annual report. It was full of cheer, for the year had been so successful to the bee-keeping fraternity.

The following officers for the year were elected: President, Mr. Davenhill; Vice-Presidents, Mr. J. R. Clynes, M.P., Mr. Chilton, Mr. Coulthurst, Mr. Lawless, Mr. Mason, Mr. Pettigrew; Treasurer, Mr. P. Kirkness; Secretary, Mr. J. Whittaker; Assistant Secretary, Mr. T. W. Wilkinson; Auditor, Mr. W. Southward; Committee, Miss Glazier, Mrs. Kettlestring, Mr. Greenhalgh, Mr. Johnson, Mr. Jones, Mr. Laing, Mr. Porter, Mr. Tyson, Mr. R. A. Wardle.

Mr. Pettigrew promised to give a lecture in February.

It was arranged to visit Museum at the Victoria University to view the exhibits of bees, etc., on March 25, to be followed by a tea, after which Mr. O. Coulthurst to introduce the subject of "Spring Feeding, or Swarming?" leading on to a discussion.

Apiarian visits during the summer to be to Altrincham and Bowden, Flixton and Davyhulme, Stockport, Heywood, Birch Vale, Marple and Mellor.

Mr. Johnson reported that he and his friends got over 300 lbs. of heather honey from the six stocks which they took to the moors in Derbyshire.—J. Whittaker.

A New Association at Braintree.

The Wickham Bishops and District Beekepers' Association have kindly allowed us to form a Braintree, Bocking and District Branch under their supervision

A depôt for appliances is being formed in the charge of Mr. Alan Potter, where members may obtain their goods at a discount. The following will be kept in stock, viz., foundation, frames, sections, section cases, glass, tins, bottles, veils, nails, wire, embedders, metal ends, etc., "Apicure," labels, sugar. All other requirements must be ordered through the Secretary.

Members may also borrow a honey extractor (which must be returned clean and dry, being scalded with boiling water after use), blow-lamp, and "Whyte's" queen introducing cage and wax extractor.

Mr. Potter will try and arrange for the delivery of goods to outlying districts.

It is hoped to arrange a meeting for members once a month, when further details of the Association can be discussed, viz., sale of honey, wax, etc., and also to form a library. Anyone willing to lend books please notify the Secretary.

Mr. Hammond (expert to the Association) hopes to be present at several of the meetings to demonstrate and give advice when needed, and Mr. Drane and the Secretary will always be pleased to help where they can. The Association would like to send Mr. Hammond to examine all members' stocks free of charge, but funds do not allow of this at present. They will pay his railway fare, and a small charge will be made to members. The Secretary would be glad to know number of stocks, so that arrangements may be made accordingly.

(*Extract from "Minutes."*)

"*Re* Nuclei, swarms, stocks, etc., for sale by members.

It was resolved:—

1. To advertise in The British Bee-Keepers' Journal.

2. To buy for stock six travelling boxes, members to pay 1s. for use of one for each occasion of use.

3. That orders for nuclei, etc., be received by the Hon. Sec., to be dealt with in the order of application from members who notify him that they have such for sale (5 per cent. to be charged for the sale to defray expense of advertising).

Annual subscription, 5s.

Expert.—Mr. Hammond, Gt. Totham, Nr. Witham.

Local Adviser.—Mr. Drane, Boleyn's Farm, Church Lane, Bocking.

Hon. Sec.—Miss Younghusband, "Monken Hadley," Nr. Braintree.

Hon. Treas.—Mr. Yeldham, "Hill House," Church Street, Bocking.

Storekeeper.—Mr. Alan Potter, Church Lane, Bocking.

Monmouthshire Bee-Keepers' Association.

ANNUAL MEETING.

The Rev. H. G. Stanley, vicar of Marshfield, presided at the annual meeting of the Monmouthshire Bee-keepers' Association, held on Saturday at the Wrenford Hall, Newport, and among those present were the Rev. W. H. Williams, Mr. and Mrs. Llewellyn Morgan, Dr. G. R. Strong, Messrs. A. T. Young, hon. treasurer, F. Tyler-Taylor, Monmouth; R. Todd, hon. secretary, Sudbrook.

On the proposition of Dr. Strong, seconded by the Rev. W. H. Williams, the annual report was adopted.

It was stated that "Isle of Wight" or Acarine disease had been in evidence in the spring as a legacy from the previous season, and quite a number of stocks had been lost. The warm weather, however, worked wonders, and little or nothing was heard of the disease during the summer months. One or two had reported "crawlers," but it would seem that for the present at least they were practically free from the decimating scourge. There had been no foul brood in the county beyond one suspicious case.

Mr. L. Forestier - Walker, M.P., was re-elected president; Sybil Viscountess Rhondda, Mesdames L. Forestier Walker and C. H. Bailey, Lord Tredegar, Lord Treowen, Sir Henry Webb, Sir Garrod Thomas, Colonel E. Curre, and Mr. Hastings Clay vice-presidents; and the Rev. H. G. Stanley and Dr. Strong chairman and vice-chairman respectively. The committee and hon. treasurer were re-elected, and Mr. Tyler-Taylor, 18, St. James' Street, Monmouth, was elected hon. secretary, in succession to Mr. Todd, resigned.

A resolution was passed urging the Government to introduce legislation for the protection of the bee-keeping industry; the periodical examination of hives by qualified persons, making the notification of disease compulsory, and rendering persons neglecting to do this liable to a penalty.

Mr. W. R. Lilly, Bristol, expert of the British Bee-keepers' Association, gave a very interesting address on the bee-keeping industry, illustrated by diagrams, and he was cordially thanked.

Miss Ruby Lloyd, Newbridge, sang a solo, Mr. Tyler-Taylor played violin selections, and Mrs. Ll. Morgan was the accompanist.—(*Communicated.*)

Bee Shows to Come.

May 24-27 at Guildford.—Surrey B.K.A. Show. Two Challenge Trophies, Apis Club Silver Medal, B.B.K.A. Silver and Bronze Medals and Certificate, Surrey B.K.A. Silver and Bronze Medals, Open Classes Honey, Wax, Appliances, etc., Demonstrations, Lectures, etc.—Hon. Secretary, W. E. Hamlin, 43, Norbury Court Road, Norbury, S.W.16.

Notices to Correspondents

J. J. D. (Linslade).—*Insects among quilts.*—We cannot say what the tiny white insects are. Try sprinkling powdered naphthalene on the quilts and top of skep.

G. M. K. (Stourbridge).—*Shelter from wind.*—(1) Do not prevent the bees coming out. A "wind break" erected a little distance from the hives would be an advantage. (2) It is advisable to shelter the hives from the direct rays of the sun in the summer. (3) You could move the hives a yard at a time, but only on those days the bees are flying freely. Another plan is to move them to the desired spot, and put a good handful of dry grass, or hay, on the alighting board so the bees have to scramble through it when leaving the hive.

G. H. (Tamworth).—*Mould on combs.*—Spraying the combs thoroughly with a 10 per cent. solution of Formalin will probably get rid of the mould, but if very mouldy it is better to scrap the combs and give new foundation. To get rid of the pollen, soak the combs for a few days in water to soften the pollen, then wash it out with a garden syringe.

Special Prepaid Advertisements.

One Penny per Word.

Advertisements must reach us NOT LATER than FIRST POST on MONDAY MORNING for insertion in the "Journal" the same week.

Orders for three or more consecutive insertions in "The Bee Journal" entitle advertisers to one insertion in "The Bee-Keepers' Record" free of charge.

PRIVATE ADVERTISEMENTS.

MODERN COTTAGE and percentage of profits offered to Beeman who can undertake charge of bees, large orchard in Sussex; some chickens, and electric light plant.—DOTT, Woodside Vicarage, S.E.25. c.42

50 LBS. REAL WELSH HONEY, £3; tin and carriage free.—BATEMAN, Eglwyswrw, Pembs. c.43

PLANT a border of Linouanthes Douglasii and let your bees make good honey; 100 plants, 3s.—COOKSON, Pontshill, Ross, Herefords. c.44

TWO 6-frame Stocks Italian Hybrids, 1921 Queens, April-May, 60s.—WALLACE, Hedenham Lodge, Bungay, Suffolk. r.c.46

BOOK NOW!—Limited number May and June Swarms, 25s. Cash with order.—LEE, Glenmar, Southminster. c.48

FOR SALE, good second-hand empty Hives, complete with frames, extra supers, frames, lifts, 800 new sections, 72 enamelled section cases, 30 good skeps and boards, bee traps.—LAMB, Burton Pidsea Rectory, Hull. c.50

MUST SELL.—Second-hand Honey Extractor, Heather Honey Press, good as new, Shaving Tin Lined Tank, 4 ft. 6 in. x 2 ft. 6 in. x 3 ft., for 14-in. frames, Steam Wax Extractor, two Bottling Tins, one Combination Wax Shaving Tin, 8-gallon Milk Tin, Smokers, Veils, and Gauntlets, 200 screw-capped 1-lb. Bottles, Shaving Knife Heater and Knives, Honey Cases sectioned for 24 1-lb. bottles, 50 lbs. roll new Corrugated Paper, 2 ft. 6 in.—LAMB, Burton Pidsea Rectory, Hull. c.51

17 STRONG Italian Hybrid Stocks, £3 10s. each, April delivery; guaranteed healthy; travelling boxes 10s. extra, returnable.—H. YOUNG, 42, James Street, Cambridge. r.c.52

20 ITALIAN STRONG STOCKS for Sale, guaranteed free of disease, Penna and Bozalla Queens, 80s., carriage paid, in returnable travelling box, 10s. Honey, finest quality, in 1-lb. screw top bottles, 1s. 9d. each, packed free on rail.—WALKER, Symonds Hyde, Hatfield, Herts. r.c.49

ONE Pedigree White Leghorn Cock, 11 months, 15s.; one Conqueror pattern Hive, sliding brood and shallow frame chambers, clean and well painted, 25s., free on rail; four sets of 10 Brood Frames, each with drawn-out combs, 20s. per set; good, well painted and clean Hives, 15s., 17s. 6d.; Shallow Frame Cases and 8 frames of Comb, 10s. 6d. each; Section Racks, filled with combed sections and metal separators, 8s. 6d. Cash with order.—W. A. WOODS, The Firs Apiary, Normandy, near Guildford. r.c.53

IN CONSEQUENCE of the Herefordshire County Council giving up their Restocking Scheme, the Apiary is for disposal. Italian or Italian Hybrids, all good, healthy 10-frame Stocks, all 1921 Queens, either with or without hives, without hives sent in special travelling box carriage paid to nearest station, 70s.; box charged 10s. extra, which will be returnable and cash allowed when received. Also 200 drawn-out Shallow Combs, 11 top bars, perfectly healthy, 18s. 6d. per dozen, carriage paid. Orders booked in rotation. Cash with order.—J. ARNFIELD, Arncroft, Bremton, Hereford. r.c.59

GIVING UP BEE-KEEPING.—Three Hives, racks, frames, feeder, sundries, £4 and carriage.—LOCKSLEY, Willingdon, Sussex. c.63

SELL.—Rotax all-brass Motor Car Head Lamps, self-contained acetylene, very powerful, 30s. the pair; two small powerful Acetylene Brass Head Lamps, with separate generator, suitable light car or cycle car, £3 the set; Austin Rear Wind Screen, mahogany framework, £7; set of Withers' "Lubrigait" patent Spring Gaiters for Austin 20 car, used only a few months, £4; Mills' Automatic Acetylene Generating Plant, suitable for 10-roomed house, £6; quantity of Acetylene Gas Brackets and Chandeliers, prices with particulars; small folding Magic Lantern, 30s.; single barrel .410 Gun, 30s.; motor cycle all-rubber Ponco, reaches to ankles, wind- and weather-proof neck and sleeves, 50s.; all carriage forward.—HERROD-HEMPSALL, Old Bedford Road, Luton, Beds. c.77

FOR SALE, two Hives with frames and all the apparatus for bee-keeping.—Apply, after 4 p.m., 292, Willesden Lane, N.W.2. c.84

YOU CANNOT EXPECT EGGS unless you keep birds that have been bred for egg production. Chicks, White Leghorn (Lady Eglantine strain), Leghorn-Wyandotte (Snowden's), Light Sussex, 16s. dozen; sittings, 8s.—COBB, 33, Bevan Road, Plumstead. r.c.85

FOUR STRONG STOCKS, 10 frames, Italian cross, very strong, hives in good condition, 75s. per lot.—GEORGE CREASEY, JUNR., Stockhurst, Oxted, Surrey. c.1

WANTED, copy of "The Honey Bee," by T. W. Cowan.—Box 55, BRITISH BEE JOURNAL Office, 23, Bedford Street, Strand, W.C.2. c.29

AMERICAN GOLDENS.—Surplus Stocks for disposal (Brockwell's strain), price according to number of combs. References may be obtained from Mr. J. Price, the County Instructor.—Particulars, J. BRACKEN LEIGHTON, 2, Henry Street, Stafford. r.c.3

SEVENTH YEAR of successful wintering through selected strain and qualities. Can recommend a few Stocks of Hybrids or Italians, 10-frame, £3 12s. 6d.; 8-frame, £3; carriage paid.—BALE, 1, Hodford Road, Golders Green, N.W.11. r.c.5

SURPLUS ITALIAN STOCKS, delivery May. Honey Press, scarcely used, 25s.; excellent Honey, £7 cwt., free.—DOUPE, Maam, Galway. r.c.2

FINEST NORFOLK HONEY, granulated, £6 cwt. on rail; tins free.—ISAAC SOUTHERLAND, East View, Brancaster Staithe, Norfolk. r.c.6

FOR SALE, two healthy Stocks and Hives of 9 and 10 frames each, £3 10s. each.—18, Blake Road, New Southgate, London, N.11. c.11

TEN select pure Italian Stocks, Penna's 1921 Queens, guaranteed healthy, 80s. each, f.o.r., April delivery.—JOHN RUMBALL, Ayot St. Lawrence, Welwyn, Herts. c.14

CAN OFFER strong surplus Stocks of Bees (Hybrids) on 6 standard frames, wired combs, 1921 Queens, good working strain, mid April delivery, 55s., carriage paid.—WM. CHANNELL, Grove Apiary, Histon, Cambs. r.a.70

GOOD GLAZIER'S DIAMOND, perfect, 8s. 9d.; double .12 bore Breechloader, perfect, 98s. 6d. —HUBBARD, Northkilworth, Rugby. r.c.15

SWARMS.—Orders coming in fast, but can still book a few more at 30s., carriage paid. Cash with order.—HALFORD, West Wratting, Cambs. r.c.38

TWENTY strong 10-frame Stocks Italian Hybrids (Simmins' strain), April delivery, 90s. each, carriage paid; approval; deposit; box 10s., returnable.—ERNEST GRIFFITHS, Helsby, Cheshire. r.c.33

TO CLOSE AN ESTATE.—Several 10-frame Stocks healthy Dutch and Italian Bees, in bar-frame hives, nearly new, April delivery, £5 each, carriage paid.—Apply, by letter, TATHAM, "Sycamores," Granville Road, North Finchley, N.12. r.b.72

20 STRONG STOCKS ITALIAN HYBRIDS, good working strain; free from disease; satisfaction guaranteed; April-May, 90s., carriage paid; Hive, 20s.; box 10s. extra, returnable.—REV. COOPER, 62, Park Hill, Carshalton. r.b.75

FOR SALE, two strong Stocks in frame hives, also empty Frame Hive with Supers complete. What offers?—MRS. MORTON, Heath Lodge, Lexden, Colchester. r.b.93

COMPLETE MODERN APIARY FOR SALE, consisting of 40 strong Italian Stocks (1921 Queens), in nearly new 13-frame Hives, zinc-covered roofs, each hive fitted with excluder and two supers; 4-frame Extractor, Ripener, Feeders, etc.; carriage paid in Great Britain; April delivery; £300, or near offer.—Box 48, B.B.J. Office, 23, Bedford Street, Strand, W.C.2. w.11

VERY finest quality Hampshire Honey for Sale; 5 cwt. in assorted size tins.—Box 50, BRITISH BEE JOURNAL, 23, Bedford Street, W.C.2. a.24

BUSINESS ADVERTISEMENTS.
(1½d. per word.)

THE WISE BEE-KEEPER looks for quality. The South Hampshire Apiaries breed only from the very best strains. Result: Quality and satisfaction. Beginners' Outfits from £5.—All communications, H. E. NEWTON, New Milton, Hants.

BEES FROM HOLLAND.—The best Dutch Stocks offered in original skeps (in crates of six skeps); moderate prices; delivery March. Price List on application.—HENK v. LANGEVELD, Gasthuisringel 42 Rood, Haarlem. c.61

For best bees, queens and appliances come to PEARSON & GALE, Marlborough.

GRAFTON ITALIANS for pleasure and profit. Fine early Nuclei from £2.—Fullest particulars, MASOM & HEDLEY, Grafton Regis, Stony Stratford. c.45

KOTSWOLD KANDY KAKES! 7 for 8s., 10 for 11s.; incomparable quality.—BOWEN, Queen Specialist, Cheltenham. c.56

THE NEW FIRM.

First Edition of five brochures detailing my Specialities—original designs Hives and Appliances—is nearly exhausted. Second Edition now being printed. Send 4d. stamps.

JAMES B. BALLANTYNE,
HAZELBANK, LANARK.
c.57

IMMEDIATE DELIVERY.—Exceptionally good Skeps Dutch Bees, 1921 Queens, full depth combs, guaranteed healthy, £3 10s. each, carriage paid. Cash with order.—RAIT, Dyke, Forres, Morayshire. c.60

STRONG STOCKS ITALIAN HYBRIDS, guaranteed healthy, 1921 Queens, April delivery; 8 frames, 70s.; 10 frames, 85s.; all wired; will accept less for three.—MRS. "S.," Middleton, Pickering. c.64

IMPORTED CARNIOLAN QUEENS.—Reduced prices. List, stamped, addressed envelope.—WOODLEY, Thorne, near Doncaster. r.c.58

W.B.C. HIVES, 23s. each. Stamp particulars. Hive Legs, oak, set 1s. 3d., postage 9d.; two sets, 3s. 3d.; creosoted, 6d. set extra.—JACQUES, Apiary, Lichfield. c.76

BRITISH STANDARD 3-FRAME NUCLEI, £1 17s. 6d.; 8-frame Stocks, £4; 16 x 10, £2 2s. and £4 4s.; delivery April-May.—R. P. SIMS, Lyncot, Downs Road, Coulsdon. c.80

NOW IS THE DANGEROUS TIME.—4 lbs. Candy, 4s. 6d.; 10 lbs., 9s. 9d.; plain or floured.—COBB, 33, Bevan Road, Plumstead. r.c.81

DUTCH BEES, in skeps, £3 10s.; Swarms, 25s. to 35s.; Stocks and Nuclei, standard or commercial.—COBB, 33, Bevan Road, Plumstead. r.c.82

NUCLEI.—3-frame Simmins', pure Italians or Carniolans, 40s.; Hybrids, 30s.; carriage paid; 10s. deposit on returnable box; delivery June.—HOWLETT, "Sylvabelle," Tring. r.c.7

"DAILY MAIL" BEE HIVES, complete or in the flat.—TROY & CO., LTD., Iverson Road, Kilburn, N.W. r.c.18

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E. H. TAYLOR, Ltd., BEEHIVE WORKS, WELWYN, HERTS.

ORDERS booked for 3-frame Nuclei, 35s.; Swarms and Stocks, prices of latter according to requirements.—THE FIRS APIARY, Normandy, near Guildford. r.c.54

OURS ARE JUST GOOD BEES.—Not the miracle working super-bees one hears about, but just the highest grade of pure Italians. Certainly as good a strain of hard-working little Bees as we have met (or had authenticated evidence of). Perhaps Stocks or Nuclei of these are what you want? Our original guarantee against Acarine disease still holds good.—WELSH BEE GARDENS, Brecon (Proprietor, Lt.-Colonel Weaver Price). We like helping beginners. r.c.71

QUEENS of world-famed American-Italian strains ensure immunity to Acarine disease under rational management. Booklet on "Rational Management and Prevention of Disease," 2d.—STURGES, Shenstone, Hartford, Cheshire. r.c.72

THE BEST INVESTMENT is an Ambrosian 6-comb Stock at 60s. c.73

THE AMBROSIA APIARIES S. Farnboro', Hants. c.74

HUSH! HUSH!!—Perchance the Ministry of Agriculture still sleepeth! Remedy for "Isle of Wight" disease. Eleventh year. Members S.M.B.C. only as before. If any bee-keeper would like to assist an ex-Service man, send me two stocks to Burwell, G.E. Ry., as diseased as you like, no foul brood, and I will pass one on healthy. Business only.—THOMAS, Burwell, Cambs. c.75

EXCEPTIONALLY productive and healthy strain. Two stocks produced over 800 lbs. of honey in one season. 5-frame Nuclei of this strain now offered for April-May delivery at the special rate of 40s. (carriage paid), plus 10s. deposit on returnable box.—CHIVERS & SONS, LTD., Histon, Cambridge. r.c.16

COLONIAL HONEY FOR BEE-FEEDING.—Australian new white, 60-lb. tin 39s., two tins 77s.; finest West Indian, 56-lb. tin 41s. 6d., two tins 75s.; carriage paid Great Britain.—LONDON TRADING AGENCY, 32, St. Mary Axe, London, E.C.3. r.17

FINEST ITALIAN NUCLEI, headed by Cannell's imported 1922 American Beauty Queens, 3-frame, 45s.; 4-frame, 55s.; carriage paid; travelling boxes returnable; satisfaction guaranteed.—HOGAN, Boxford, Suffolk. r.c.26

STRONG, healthy Stocks Dutch Bees in skeps for Sale, delivery March, April.—DAVIDSON, Forest Road, Burton-on-Trent. c.35

SWARMS BOOKED, May delivery, Italian, Dutch, Carniolan, £1 12s. 6d.—DAVIDSON, Forest Road, Burton-on-Trent. c.36

BEE-KEEPING.—Instruction by Correspondence Courses. Difficulties solved for beginners. Students thoroughly prepared for the British Bee-keepers' Association Examinations: (a) Preliminary, (b) Intermediate, (c) Final.—For particulars apply to PENNINGTONS, Horticultural Tutors, 254, Oxford Road, Manchester.

Orders booked now for April Stocks. Catalogues now ready. PEARSON & GALE, Marlborough.

ITALIAN and Hybrid Stocks and Nuclei for Sale, strong and healthy, delivery April, May, low prices. — DAVIDSON, Forest Road, Burton-on-Trent. c.34

ALBERT HOPKINS, Breeder, Importer best Italian Stocks, Nuclei, Queens. Satisfaction guaranteed. Prices moderate, application. 25 years' practical apicultural experience.—Woodland Valley Apiary, Lyminge, Kent. r.c.26

EXCELLENT opportunity for Pupils to learn honey production on a range of apiaries; premium required.—THOMAS, Burwell, Cambs. r.c.39

FERTILE ITALIAN QUEENS, the best, April, 12s.; May, 10s. 6d.; 4, 38s.; 6, 56s.; 12, 96s. Special quotations 25 to 100 queens. Safe arrival guaranteed.—ATKINSON, Fakenham. r.c.40

ITALIANS.—Nuclei, 1922 Queens, 3-frame, May 40s., June 32s.; Colonies, spring delivery, 6, 8, 10 frames, 50s., 62s., 73s.; carriage paid; returnable crates.—ATKINSON, Fakenham. r.c.41

BRITISH bred Italian Nuclei and Queens. Prices on application. — CHARMAN BROTHERS, West Hill Apiary, Brookwood. r.b.4

MAY SWARMS, £1 12s. 6d., packing, carriage free; 4-frame Nuclei (May), 42s., carriage paid; boxes 8s. extra, returnable. Cash with order.—H. WELCH, Wickham, Hants. r.b.62

WICKHAM BISHOPS ASSOCIATION is now booking orders for early delivery. Prices: 5-frame Nuclei, 50s.; Stocks on 10 frames, 75s.; Swarms from 25s.—Address, BEE-KEEPERS' ASSOCIATION, Wickham Bishops, Essex. r.b.76

BUCKFAST QUEENS are the very best. 1922 Circular and Price List sent free on application.—REV. BR. ADAM, Buckfast, S. Devon. r.b.81

"LAZENBEE" ITALIANS.—Booking now. Few choice 3-frame Nuclei, price 30s., May-June delivery.—KENDALL YOUNG, 100, Elms Apiary, Sudbury, Middlesex. r.b.89

20 ITALIAN STOCKS, £4 5s. each; 17 Blacks, £3 15s.; travelling boxes 10s. extra, returnable. Guaranteed healthy on arrival. Great satisfaction given to all customers last season.—J. YOUNGER, 16, Maid's Causeway, Cambridge. r.b.74

ITALIAN HYBRIDS.—Strong Stocks, 85s., March-April delivery; 3-frame Nuclei, 35s.; 4-frame, 42s.; all carriage paid; boxes 10s., returnable.—COLLINS, 45, Coronation Road, Sheerness. r.b.76

HAVE YOU READ "THE BEE WORLD"? If not, why not? Every number in itself is a useful literary work for practice and reference. Specimen copy free.—Offices: THE APIS CLUB, Port Hill House, Benson, Oxon.

QUEENS by return from April till October.—PHARSON & GALE, Marlborough. w.14

NEW HARDY YELLOW VARIETY.—No loafers hottest days. Gathered honey 1921 after all others had retired from business.—Particulars, S. SIMMINS, Queenland, Heathfield, Sussex. r.a.13

JACK TICKELL.—For Queens, Stocks and Nuclei. List free. — Westbourne Apiary, Cheltenham. r.a.54

FLAVINE CANDY, 4 lbs., 5s.; 6 lbs., 7s.; 10 lbs., 11s.; all post paid.—S. H. SMITH, 30, Maid's Causeway, Cambridge. c.67

DUTCH BEES.—Send for my artistically Illustrated Catalogue outlining my method of managing bees profitably. Read my notes on Queens and Queen Rearing. Will interest the expert and amateur. Free for the asking.—WHYTE, Bee Farm, Cumbernauld Station, Dumbartonshire. r.b.32

MY CHOICE GOLDEN ITALIANS, favourites amongst prominent apiarists, are again offered in rotation. Queens and Nuclei.—E. COOMBER, Breeder of Superior Golden Bees, 64, Ronald Park Avenue, Westcliff-on-Sea. b.40

STRICTLY BUSINESS.—One dozen Flavine—8 Powders, 1s.; a Japanned Sprayer, post free, 6s.; a Floorboard Feeder, to fit under any hive, 10s., post paid.—S. H. SMITH, 30, Maid's Causeway, Cambridge. c.65

BOOK NOW!—Choicest home-bred Carniolan Queens for 1922.—PEARSON & GALE, Marlborough. b.24

THE ACARINE 1921 ECLIPSE PAD.—It knocks out mites and moths. Your money back if not satisfactory. Price 5s., post paid.—S. H. SMITH, 30, Maid's Causeway, Cambridge. c.65

ADMINSON'S SEMI-COMBS.—Nuclei on these combs from mid-May at cheapest rates.—PEARSON & GALE, Marlborough. r.b.66

BENHALL BEES.

A LIMITED number of really good 3-frame Nuclei, headed by purely-mated 1922 Italian Queens, during May £2 10s. Cash with order.—RIVIS & GRAY, Benhall, Saxmundham. c.79

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PARCHMENT CONTAINERS, stamped "Fine Lemon Curd," offered at half price to honey producers who can affix labels over the printing. 1 lb., 4s. 9d.; ¾ lb., 4s.; ½ lb., 3s. 6d.; ¼ lb., 2s. 3d. per 100. Also plain 2 lbs., 14s.; plain 1 lb., 9s. 6d. per 100. Add for carriage 1s. 6d. to each 5s. value ordered. Pure Honey for bee feeding, etc., 60-lb. tins, f.o.r. Terms cash. Samples 6d.

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You can have again the world-wide famous pure

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direct from their mother country. That's the race. No more recommendation is necessary. The prices of my select tested fertile Carniolan Alpine Queens are: March, April, 14s.; May, 13s.; June, July, 11s.; August, 10s.; September, October, 9s. Safe arrival guaranteed. Price List free. Order in time.

Exporter of Carniolan Alpine Bees to all parts of the World. First and largest in Carniola Awarded 64 Honours.

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BITNJE, P.O. BOHINJSKA BISTRICA, UPPER CARNIOLA S.H.S. EUROPE.

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QUEENS *and* QUEENS—

I could produce queen bees profitably at three or four shillings each. Would such queens bring clients back for "more of the same"? Would they be worth even three shillings? No.

Undoubtedly, there is more profit and less responsibility in honey production; but the rearing of choice queens is the most fascinating work I know: I do only that one thing, but I do it with all my might. And my clients benefit.

When, for instance, I rob some honey stock, ready and waiting for the golden harvest, to supply brood and bees to an already overflowing cell-builder, I don't say, "There goes a good crop of lost honey," I say, "Those extra bees will help me to rear even sturdier queens." And I feel pleased, but it's expensive.

Therefore, when you buy your queens from me, you are buying at the same time my care and skill and patience and love of the work; and you may take my word that queens such as my American Beauties cannot be bettered at any price. Order just one to try, she's guaranteed; just one. A. *New* Client, Esq., that's all I ask——for this season!

An American Beauty: May, **12/-**; June, **10/-**; July, **9/-**: delivered in perfect condition, within the fortnight assigned; *quality guaranteed.*

SKIPWITH CANNELL, The American Breeder of American Beauty Queens, AUX SIEYES, PAR DIGNE, B.A., FRANCE.

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NOW READY. **Write for a Copy, post free**

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Glass top boxes (1 or 2 lb.)	4-lb. **5/**	7-lb. **8/3**	10-lb. **12/-**	Post free
Plain top boxes do.	4-lb. **4/8**	7-lb. **7/6**	10-lb. **10/-**	do.

C. T. OVERTON & SONS, CRAWLEY, Sussex.

500 lb. Per Colony.

That is what clients may reasonably expect from "White Star" bees under careful treatment. One stock exceeded that yield in 1921. A "W. S." Nucleus increased to seven stocks, and gave over 360 lb. surplus. In average years "W. S." Stocks have exceeded 350 lb.

Simmin's Safety Guarantee—All our Six-Frame Stocks and Three-Frame Nuclei, are absolutely **guaranteed** against loss from Disease, Wintering, or loss of Queen (other than by swarming) up to **May 1st, 1923.**

Go to the Fountain-head for "White Star" Bees and Queens. Do not say too late, as many write: "The bees I bought at a cheaper (?) rate have cost me much more than if I had secured "White Stars" in the first place."

Large discount on usual Cash orders for Nuclei and Stocks. Make supered stocks quickly; young bees hatching all the time. No waiting nearly four weeks for first brood of swarms to hatch, and the old bees dwindling meantime. 1922 Queens only.

Plain Price List free. The full 20 pp. descriptive and Instructive Annual, **4d.** post free.

S. Simmins, Queenland, Heathfield, Sussex.

DUTCH BEES.

Slump in Prices!!

Before placing Orders send for my Catalogue. It will pay you.

24 pages original matter, outlining a new system of profitable management, notes on queens and queen rearing. Full of Illustrations.

STOCKS. NUCLEI. QUEENS. SKEPS.

Far and away the largest importer of bees in Britain. Dutch bees are resistant to disease. Dutch bees are prolific. Dutch bees hold the record for honey production. Dutch bees are gentle.

Look out for startling announcement next week!

WHYTE, Bee Farmer, Cumbernauld Station, DUMBARTONSHIRE.

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The Bee-Keepers' Calendar.

MARCH, 1922

16 Thursday. "And I will not account her any of my good Housewives, that wanteth either Bees or skilfulnesse about them."
William Lawson, "The Husbandry of Bees."

17 Friday. "Him Phoebus . . .
Showed Wisdom lord of the human intricate swarm,
And whence prophetic it looks on the hives that rave."
George Meredith, "Melampus."

18 Saturday. "Bleeding and torn from
Freedom's mountain bounds
A stained and shattered drum
Is now the hive where, on their flowery rounds,
The wild bees go and come."
Whittier, "The Hive at Gettysburg."

19 Sunday. "Does thro' a fragrant zodiac run,
And, as it works, the industrious bee,
Computes its time as well as we!
How could such sweet and wholesome hours
Be reckoned but with herbs and flowers?"
A. Marvell, "The Garden."

20 Monday. "Nor thou be rageful, like a handled bee,
And lose thy life by usage of thy sting."—
Tennyson, "The Ancient Sage."

21 Tuesday. "That for sorrow my muse sings
Love's a bee, and bees have stings."—*Anon.*

22 Wednesday. "Across the woods, and less from Indian craft
Than bee-like instinct hiveward, found at length
The garden portals."—*Tennyson, "The Princess."*

Seasonable Hints.

In the southern part of the country there will now be a fair amount of forage for bees in the crocus and other early spring flowers, and there will probably be some also farther North. A little observation at the front of the hives during a spell of warm, sunny weather will give some idea of the condition of the colonies within. If pollen is coming in it may generally be taken for granted the queen is all right and that breeding is in progress. A peep under the quilts in the Midland and Northern parts of the country should be the extent of any examination for the next two or three weeks. In warmer places a brief examination of the combs may be made just to ascertain exactly the quantity of food and brood in the combs, but it must be done on a warm day when there is no wind, or brood may be chilled. Later on the stores may be equalised, a comb taken from those that have abundance and given to those with scant stores. At the same time the division board should be moved

up to confine the bees to the number of combs they are able to cover, thus conserving the warmth of the hive. Drinking fountains should also be provided where necessary. Flour candy may be given, and artificial pollen be placed in a warm, sheltered spot and protected from rain. Pea flour is the best for this purpose, and may be put in a box of wood shavings or dropped in the open crocus flowers.

A Dorset Yarn.

" Oh, were yon hills and valleys mine
Yon palace and yon gardens fine! "

The bee-keeper need not covet the hills and valleys; he has only to have his stocks in his little plot of garden or allotment; his bees will find the food for themselves. He who has a desire to work a plot of land can have it for the asking; the local councils must find it for you. If you have no garden, place the stocks in a corner of your allotment field; bees will forage the whole neighbourhood for stores.

Just now the forest trees are marvellous with blossom; the rough winds have blown some of the branches off—these are crowded with flowers; the bee-keepers in the sheltered valleys must be now having a harvest. We have had strong winds off the Channel Our bees have not been able to do much but fly round the hives, but each way we go in Dorset just now one cannot get away from flowering trees. The willows are delightful, the female flowers smell strongly of honey, the male inflorescence has shown its yellow pollen, but the elms with their huge size covered with so many flowers are wonderful The common elm grows to such a great height, its flowers are high up, but the wych elm has more drooping branches; these are just now a treat to see, so crowded are the branches; no need to covet the rich man's hills and dales; if only the high winds subside bees will have a fine time. Wooded hills break these high winds; bees in the valleys can do better at such times. The vegetation in these sheltered valleys just now is wonderful. What a poor world it would be without trees! How warm trees will make the villages! I have noticed this in the villages of Dorset. Some are on wind-swept plains, others close to the river. I was at one called Sturminster-Marshal on March 4. Much of this land was owned till this last year or so by wealthy owners, and was rented to large farmers. These have now purchased some of the farms and odd pieces of land as it comes into the open market. One of these pieces a farmer told me he has planted with hundreds of apple trees. I asked him what varieties he had planted. He told me Cox's Orange Pippin. I congratulated him on his choice, but had to tell him he would not be successful with them without bees. He was ready to stock the land with bees, if only his man would look after them, he would pay for everything. That is why I went to the village to see the grower; it was a day that the Church Bell-ringers' Guild met at the church, many hundreds years old. Some of the bells are as old as the church, some are new, but the old ones had the best tone. Part of the church is very fine, with its old Norman arches, but alterations have been made, very beautiful in themselves, but have not added to the harmony of the whole. But I am getting away from the text, " Oh, were those hills and valleys mine! " This wealthy farmer said he made a vow never to plant trees save on his own land. This was not his till he was nearly 70. I told him he had missed a great deal of pleasure. He hopes to get the pleasure now out of his extensive fruit plantations; these are his now. He is an excellent farmer. His man at Sturminster is only a short-timer, only 20 years of service; many of them have put in 25 and 30 years with him. He has farmed many hundred acres, but has never planted fruit trees or kept bees; all that time he has wished the hills and the valleys were his, so that he could plant them as he would like them. He has chosen a rich soil by the river Stour. He is only planting dessert varieties, but in this rich soil it must be a good investment. It is a good area for bees; there are very few lots left after the disease that has swept through Dorset. High-wooded hills keep off the strong winds from the sou'-west, high down-lands protect it from the north-east; just such a place I should choose did I look for one myself, but it is so difficult to get these nice positions for bees. He had to buy a block of four houses to get one for his man to live in. When one's capital is limited one cannot do as one would, but as one can, but we must often wish with Burns, " Oh, were those hills and valleys mine! "

[This text from Burns was brought home to me on Wednesday last, the morning after that fierce gale that uprooted trees and unroofed thatched houses. I was engaged to lecture to the Women's Institute on bees, but it was put off to evening, as the men wanted to hear me. The owner had put up a commodious soldiers' hut for the use of the estate hands and villagers. They sent a car for me (nearly 30 miles), the house is 10 miles from nearest market town, all surrounded by wonderful trees of cedar and Douglas pine, with huge limes and elms, ash and beech, 500 ft. above the level of the sea, but the great forest trees kept off the fierce winds, the near valleys were of willow and hazel. Through the great trees one could see the " Hills and Valleys " of Wiltshire, part of the famous Cranborne Chase, which covers a large part of Dorset and the borders of Wilts. In the big house there is a copy of the Charta given so many years ago to their ancestors by the ancient kings. The owners of this great estate do all possible to make the life of the hands and villagers as happy as possible by lectures and concerts, from 6.30 to 9.30. Whether they came to hear about bees in the first half, or the concert in the last half, it is not for me to say, but come they did, both young and old. Many of the old are pensioned off, but still live on the estate. During the refreshment interval the

gardeners and keepers all came to speak of the bees that had all died when the disease swept Dorset, but the keepers had kept some since from the wild lots in the trees.

The next morning, between 5 and 6, began the sweet tones of the blackbird, followed by the songthrush. One could not stay in that great house and hear the wonderful song of birds, the wind had dropped, and the huge trees were still; the cooing of pigeons, with the shrill call of the woodpecker, were too alluring for the "Dorset Yarner." The house was surrounded by a "ha—ha," to keep out the rabbits and deer. The delightful woods of ash and holly with shooting drives going through them were like a page from the past; the Japanese deer were the least shy of strangers; the three hours till breakfast passed very quickly among the "hills and valleys."

The house was like a museum, full of old armour and trophies; the dining-room walls were hung with wonderful pictures. All this was a hospital during the war. In the big guest bedroom that I slept in were the brass slides on the walls that had the numbers of the soldiers' beds. The wife of the owner was matron; the soldiers that she had there have spent many holidays there since. So much is this lady esteemed, I am very much afraid that they break the First Commandment, so much is she beloved by all. She keeps pedigree poultry and turkeys, the cocks and hens will rest on her hands, and the turkeys will let her stroke them. After a visit to the gardens she motored me off to another Women's Institute for another yarn at 3 o'clock, then to take the train to Southampton to yarn again at 7.30.

On the next evening, with Mr. Young, the Hampshire bee expert and lecturer, and Col Kettlewell in the chair, we had another bee-meeting at Hythe, a small village over the water from Southampton. The gallant gentleman has given the whole neighbourhood the bee fever; he has himself lectured and sang till he is a celebrity in that area. His delightful house, close to a 12th century church, overlooks the harbour and the gigantic liners in Southampton Water. His life is a very happy one; his bees and poultry, his cows and horses in such a delightful place after soldiering in all parts of the world, with water on one side and the hills and valleys of the New Forest on the other, he cannot be dull or idle.—J. J. KETTLE.

Jottings from Huntingdonshire

Does anyone ever feel sorry that he or she took up bee-keeping? Is there anyone well on in years who can look back and say, "One of my regrets is that I ever became enthused by apiculture?" Well, there are remarkable people in the world, and I suppose it would be unusual if beedom didn't secure one or two of these. I listened to a farmer the other day—yes, he was clothed and in his right mind—describe to me his bee-keeping experiences, his good luck, good fortune, general success, and his ultimate revolt at anything and everything savouring of bees. He is now 71 years of age—he began bee-keeping at 17, and was therefore not greatly troubled with *Tarsonemus woodi* in his early days. His first lot of bees was in a skep. He supered and re-supered, and got 110 lbs. of surplus honey in his first year. Excited by his gain, he developed his apiary the next year, still sticking to skeps, another year in which success was added to success made him a red hot enthusiast. His third year was not good, the season being all against him, but although his takes were small his stocks increased. After a few years he adopted bar framed hives. These were made by the local carpenter, and made to contain ten frames 20 x 7. He was not long in discovering that a strong stock wintered on such frames invariably died of starvation, and so little by little he opened his mind and decided to adopt the frames now known as standard size. Within two years he had row upon row of strong active colonies. The profit on his honey was sufficient to pay a man and leave a good margin. Some years he made hundreds, others he managed only to pay expenses, but balancing one year with another he did "rale well." Then came the glut. Honey was pouring forth from his ripeners or was stored away in section crates faster than the demand, and thus it came about that a winter passed and another honey flow started, with 10 cwt. of honey on his hands. That year was bad for nectar gathering. The summer being cold and wet, our farmer friend thought it would be a good idea to expose his stored honey in various parts of his farm, so putting some in a shed here and some in a shed there, some in this barn, some in that, he soon had his own bees and those of half the county of Leicester (or thereabouts) buzzing about his farm buildings, to the great discomfiture of the workmen and the stock. He vouched for the truth of the following:—Six miles away a friend of his had eight stocks of bees, and was surprised to note the rate of the honey flow when the climatic conditions were against the secretion of nectar. He tried to discover from whence his bees got their supply, but failed. Meeting our farmer, however, at the local market town, and comparing notes, it was suggested that his bees were flying six miles for their stores. It was decided that on the following morning the friend should dust some of his bees with flour, some with blue, and others with red chalk; bees so dusted turned up at the farmer's, took their fill and departed. In the course of some weeks the whole of this surplus honey was carried away, but the worst has yet to come. Bees who had flown miles from various apiaries for honey and finding it gone, were not in a mind to return empty, and a terrific onslaught was made on the farmer's hives, fifty of which were completely robbed out. Sickened and disgusted, the farmer did a cruel thing—he left the rest to starve. The following spring three stocks only survived. These he gave away, and had all his hives and bee appliances stacked away in a shed; they were there for ten years, when someone came along and made him a

bid of £12 for the lot; the bargain was struck and three wagon-loads were carted away. The buyer, needless to say, will never cease to talk of his bargain I often talk to the farmer, and he still does not regret his decision to give up bee-keeping, owing to his own folly. There are some extraordinary people in the world, are there not?—E. F. HEMMING

Week-End Bee-Keeping.

(By S. H. SMITH, Cambridge.)

The insistent demand is for a short, practical, up-to-date course in modern bee-keeping, suitable for an apiary on a small scale, yet calculated to produce profitable results.

Let us look upon such an enterprise as a joint stock affair or co-partnership concern just between ourselves. By concentrating the work into a few hours on one day in the week we can get all necessary results, and so arrange matters that the bees will become interesting and paying guests.

It is understood that you have the location and the next thing to decide is where to put your hive or hives. In starting bee-keeping it is not advisable to first catch your "hare." There are several pitfalls to avoid before bringing a bee stock into the garden. Let us seek a place for the hives well apart from the usual house traffic and away from the favourite flower beds of your wife; also where they will not interfere with the gambols of your children, and not too close to where your housemaid may hang up clothes to dry

Having made this strategic plan we may proceed to develop our tactics. We need a clear space in front of the hives to allow an uninterrupted flight for the bees, facing south, if possible; if shaded by a tree all the better, and an established path back of the hives will allow of frequent visits without getting our feet muddy.

Here is the very place. Now get busy putting down a few barrows of ashes while I trim off some low-hanging boughs. There is nothing so annoying as to have one's veil torn or pulled off by low projecting branches.

Spread the ashes over about 4 ft. square for each hive. Yes; you might as well allow for two or even three hives. There is not much more work attached to them than there is to one And in case of accident to your one queen, or in case of a lost swarm from your one stock, a one-hive apiary is put out of action for the current year. Yes, I know the books say start with one stock and make it pay its way before investing more money. But our enterprise is going to be a commercial one, and we shall be reaching for more profits than the average amateur usually looks for. We are going to make two dividends per year; one from bees and one from honey.

To get these desirable results we shall have to invest some money, but we shall not be mooning about finding out what bees are capable of. We shall be going full steam ahead and doing things the average novice would not dream of doing for years, and then only after paying big money for advice. In other words, we are going to condense the experience of several years into one, but we are also going to pay our way, and then some.

At the end of the season we will buy or sell, divide profits, share and share alike, and if you are not satisfied I shall be glad to know the reason why.

You will get besides an experience that would cost you a good deal more in cash and time than any work you will do for me would figure up. Yes, I shall expect you to work with me at my apiary. You surely do not imagine that we could do many stunts with a couple of hives in your garden. Yes, I am going in with you to get your aid in my apiary. But you need not be alarmed about the hours we shall spend there.

Figured out in time units we shall devote just sixteen half-days during May, June, July and August, or eight full days to apiary work for the whole season of 1922. Farm labour takes a half-holiday on Saturdays, and that is when I can use you. If Saturday is wet we shall have to work on Sunday, and if that day fails us we must use the early hours on Monday. This bee-keeping is a movable feast dependent on the weather.

I see you have 1922 price catalogues, but we will not go into close caucus about costs of bees, hives, and equipment just yet. We will first put in a day at my apiary, and maybe I can show you a bargain or two. Of course, it would be best to start with everything new and of the best. But both of us belong to the "New Poor," and we have to pinch along to keep our heads above water

To give you a chance to learn all the ropes you may act as treasurer, secretary, general manager, and buyer of this concern once we get going. When do we begin work? Not until the cuckoo calls, but we might as well be dead as not up to date. Listen. After you have heard that jolly bird calling for a few mornings you will be irresistibly compelled to jump out of bed, hurry into your clothes, and you will find yourself biking over to my apiary. It will be an imperious call of my sub-conscious mind to yours; you will answer it by coming, and you will find me there.

Just one thing more. Here's a list of a few bee books you might buy or borrow. Read them carefully and ask any questions you like, but don't attempt to "invent" a hive or start a bee journal before you have studied bee-keeping from A to Z. We had some horrible examples of that kind of thing during the war. There is a big past as well as a big future to the craft, but there is no room in the bee "time-space" for fakirs.

(To be continued.)

Honey Imports.

The registered value of honey imported into the United Kingdom during the month of February, 1922, was £8,812.—From a return furnished by the Statistical Office, H.M. Customs.

A Serious Problem.

Many bee-keepers rightly believe that the elimination, or rather the control, of bee disease is the most vital problem facing the bee-keeping industry in this country. This was unmistakably shown on the 25th of last month at the Central Hall, Westminster, by an appreciative and well-attended meeting of bee-keepers from all parts of the country, who came to listen to and to discuss Dr. Rennie's important address on "The Present Position of Adult Bee Disease Research."

There is another vital problem which, in my opinion, is of equal significance to the disease control question. I am referring to the advantageous marketing of home-produced honey. Short of co-operative marketing, and I should say even in its presence, it is but fair to British bee-keepers and to the general public to enforce the labelling of honey with the *country of origin* and with the name and address of the producer or of the responsible seller. The recent Newport case of adulterated honey and its damaging consequences to honey marketing (see the *Bee World* for December, 1921, page 177) is a forceful reminder and a painful object-lesson.

A number of writers indulge from time to time in boasting about their income from honey production in this country, and some go so far as to assert that the extent of demand on their honey at *standard* prices considerably exceeds their output! The writer, being in touch with some of the leading bee-farmers in England and Scotland, has no hesitation in saying that the above-mentioned experience represents a rare exception, and certainly *not* the rule. Many commercial bee-keepers find great difficulty in selling their honey at standard prices, and have to contend with the inconvenience and loss in storing an appreciable quantity of their honey from year to year, not to mention the waste through fermentation, especially in the case of heather honey. Surely it is high time to remedy this deplorable state of affairs in the interests of bee-keepers and the general public alike. The remedy lies in the hands of the rank and file of bee-keepers were they to prove true to themselves and decide on unity and action.

This problem among others will be raised at the annual general conference of members of the Apis Club, which is due to take place on Saturday, April 8, 1922 (at 2.30 p.m.) at University College, Reading. The date of the conference is opportune, since it will synchronise with the holding of the Reading Bee Fair. Members and delegates attending the conference will have more than one attraction to justify their attendance, especially as Dr. Rennie will deliver the Presidential address. Furthermore, Reading is an ideal centre for the convention of bee-keepers owing to its reasonable hotel charges and railway facilities, including the issue of cheap week-end tickets from London and other parts. It is expected that a record gathering of bee-keepers, representative of Associations and business firms, apart from commercial bee-keepers and others, will take place, since the invitation to the conference is extended to other than Apis Club members, though the latter by themselves represent a considerable force. It is hoped that this conference will evolve some constructive solution to the honey labelling question and to the other questions before it for the general betterment of the bee-keeping industry.—L. S. HARKER.

Somerset Bee-Keepers' Association.

ANNUAL MEETING

The Somerset Bee-keepers' Association held its annual meeting at the Royal Clarence Hotel, Bridgwater, on Thursday, February 23. There was an excellent attendance, members from all parts of the county being present, and the chair being occupied by the President (Mr. T. W. Cowan, F.R.S., F.G.S., F.R.M.S.).

Before the business was commenced, Mrs. Pryce Michell, of Huntworth, as President of the Branch, welcomed the County Association to Bridgwater, remarking that she had noted with concern the ravages amongst bees by the "Isle of Wight" disease, and she hoped they would learn that some remedy had been discovered whereby this evil had been overcome. She asked them to accept sincere wishes for the prosperity of the Association. (Applause.)

Rev. W. M. K. Warren, of Charlynch, also joined in the welcome, and said he hoped as the result of the visit of the Association more people would keep bees, and that some means would be found to enable them to fight this great "Isle of Wight" disease. (Applause.)

The President, on behalf of the Association, expressed thanks for the kind welcome, and said they were very pleased to come to Bridgwater, which they had not visited for some years. (Applause.)

The Hon. Secretary (Mr. L. Bigg-Wither, of Birdwood, Wells)) presented the annual report, which stated that the year 1921 would be long remembered by all Somerset bee-keepers as one of the best, if not the best, honey year of recent times.

The balance-sheet, also read by the Hon. Secretary, showed a balance in hand at the end of the previous year of £47 5s. 0½d. Receipts amounted to £186 15s. 1½d., and expenditure to £131 2s. 9½d., leaving balance in hand of £55 12s. 4d.

The Chairman congratulated the Secretary on the able report, which was the best they had had for some years. He was glad to know that the "Isle of Wight" disease was now not so prevalent. They could not expect a disease of that kind, which had prevailed so long, could be exterminated at once, and they were certain to have outbreaks from time to time, but he hoped they would be able not only to exterminate the disease, but learn all about it and how it originated. The accounts were very satisfactory, but he pointed out that they included a grant from the County Council of £25, which would have to be distributed among the different divisions, so that would reduce their balance consider-

ably. He proposed that the report and balance-sheet be adopted.

Mr. Walker (Street) seconded the motion, which was carried.

Mr. W. West (Bridgwater) proposed a vote of thanks to the retiring officials, remarking that they had all done a lot of good work, especially in connection with the re-stocking scheme.

The vote was heartily carried, and

The President, in replying, referred to the resignation of the post of Hon. Secretary by Mr. Bigg-Wither, saying that they were very much indebted to him for all the hard work he had done during the time he had been Secretary. Although Mr. Bigg-Wither had not at times pleased a few of the members, he (the President) had always admired the way in which their Secretary had, in spite of rebuffs from some people, carried out the duties. It was hard to lose a Secretary who had served them so long and well, but he had had to leave the place in which he lived, and had also to leave behind his garden and plants, in which he took such a deep interest. The President tendered the cordial thanks of the Association to Mr. Bigg-Wither for all he had done for them. (Applause.)

The election of officers followed. Mr. T. W. Cowan was re-elected President; the Vice-Presidents were re-appointed, with the addition of Major Clegg (Porlock); and Mr. L. H. Palmer (of the firm of Messrs. W. H. Palmer & Sons, auctioneers, Bridgwater) was chosen as Hon. Auditor. Lieut.-Colonel H. F. Jolly, of Bristol (Chairman of the Association), and Mr. L. E. Snelgrove were appointed as delegates to the British Bee-keepers' Association.

To fill the vacancy caused by the resignation of Mr. Bigg-Wither, Commander Graham, R.N. (of Stawell, near Bridgwater), was unanimously elected hon. secretary of the County Association.

Presentations were then made of the challenge honey pot and the medal from the parent association to Mr. W. A. Withycombe for his exhibit at the Bath show, and the third prize certificate to Mrs. Kettlewell. The examinations for the B.B.K.A. preliminary certificate were successfully passed by the following:—Miss G. Weaver (Bath), Messrs. A. Cook (Porlock), J. Bennett (Minehead), T. Sparkes (Taunton), W. West (Bridgwater), E. E. Williams (Lydeard St. Lawrence), and W. H. Woodsford (Chard); intermediate examination certificate, Mr. J. Bennett and Mr. W. West.

It was agreed that Somerset be the entertaining county at the Western Counties' Convention of Bee-keepers, to be held at Bristol in July.

A very hearty vote of thanks was accorded to Lieut.-Colonel Jolly for his generous support and active interest in the Association.

After tea an interesting lantern lecture was given by Mr. Snelgrove, entitled "Bee-keeping in Roman Times." He brought out the fact that there is a considerable classical literature on the subject. Besides Virgil's well-known description of bee-life, several other authors, of whom Columella (1st cent. A.D.) is the most important, included an account of bees in their works on agriculture. The mixture of fantastic myth and shrewd observation was very striking. The single queen bee of the hive had long been well known, but was universally regarded as the ruling king of the hive. One picturesque description tells of the king coming out of the hive and leading his subjects to furious battles in the air. This was regarded by the lecturer as an example of the ancient's imaginative writing, but at question time afterwards Mr. Withycombe gave an account which had come under his personal observation of two swarms issuing simultaneously from different hives and almost mutually destroying themselves in mid-air. Such an occurrence is extremely rare, but had, no doubt, been observed by the Romans, thus giving rise to the above-mentioned story.

A series of present-day pictures showing various types of hives, some built of mud, others of wicker work or straw, showed how, in certain parts of the Mediterranean lands, bee-keeping had continued unchanged for 2,000 years.

(Communicated.)

Cheshire Bee-Keepers' Association.

WILMSLOW BRANCH.

A highly successful meeting was held on Thursday, March 2, at The Friends' School, Wilmslow, with the object of stimulating and organising the local activities of the members. Mr. Stokoe, assistant hon. secretary of the Cheshire Bee Keepers' Association, took the chair, and in pointing out the advantages of membership emphasised the necessity for "live" officials being supported by a "live" rank and file.

The Local Secretary (Mr. Adrian E. Carter) commenced his remarks by referring to the great loss the branch had experienced through the resignation of Miss L. Brooks, the late local secretary. Her devotion and energy, even during the darkest days of I. of W. disease were of the greatest value to the district, and it was unanimously agreed that a letter be sent to Miss Brook thanking her for her past services. Mr. Carter then proceeded to suggest various directions in which the work of the district might be extended, and after full discussion it was agreed that a general meeting be held annually during the first week in March, and visits paid to neighbouring apiaries during the summer. A small committee was formed to manage these. A Show Committee was appointed, the members of which also undertook to agree to the price of honey for the district, and it was arranged that co-operative buying for the members should be attempted. Mr. Spink, Strawberry Lane, Wilmslow, kindly offered to order the goods and distribute them. Orders accompanied by cash must be in that gentleman's or Mr. Carter's hands by March 25. The question of asking for a County Association extractor to be established in the locality for loaning to the members was another of Mr. Carter's points, but the discussion was suddenly and pleasingly closed by a generous offer on Mr. Spink's part to lend his to any member re-

quiring it. The question of a literary correspondent was raised, but left over, in the hopes that a capable volunteer would shortly be forthcoming.

The hope was expressed that other branches of our County Association would follow this excellent lead, and the assistant hon. secretary promised to give all necessary help to branches desiring to do so.

Particulars as to membership, fee 5s., may be obtained from the local secretary, Mr. A. E. Carter, Newhaven, Fulshawe Avenue, Wilmslow, or the County Association hon. secretary, Mr. E. W. Franklin, Mouldsworth, near Chester.—(*Communicated.*)

Trade Catalogues Received.

F. M. Claridge, Copford Apiary, near Colchester.—Mr. Claridge has increased the scope of his catalogue. The reputation of the "Claridge Quality" queens and nuclei is maintained. In addition to bees, Mr. Claridge is now stocking a few necessary appliances, and several of his own designing are also listed.

Burtt & Son, Stroud Road, Gloucester.—Mr. E. J. Burtt has taken his son into partnership, and this, the first catalogue under the new arrangement, is replete with everything needed by the most up-to-date bee-keeper.

A. J. Steel, Spring Gardens, West Ashling, Chichester.—This 20-page catalogue also lists all that is needed by the bee-keeper.

Notices to Correspondents

M. H. K. (Norfolk).—*Dealing with neglected stocks.*—(1) Better transfer the bees in the old box to a movable comb hive. As soon as it is becoming crowded with bees, fill up a brood box with ten frames fitted with full sheets of comb foundation, and place the box on the top of this, making the joint bee-proof so the bees can only pass out and in at the entrance. When the new combs are drawn out and contain brood make certain the queen is on them, and place a queen excluder between the box and the frames. In three weeks all the brood in the box will have emerged, and a super clearer may be placed under it. It will probably be advisable to place a rack of sections, or a box of shallow combs, on the hive when doing this, in order to accommodate the bees. (2) If the combs in the other hives are good remove the wide ends—these should not be used in the brood box—and with a hot knife pare the combs down to normal thickness, and put the ordinary W.B.C. ends on the frames. If this is not practicable treat as advised for the box. (3) Apply to the County Council Expert, Mr. H. Goude, East Dereham.

Suspected Disease.

J. E. (Carm.), "Interested" (Wakefield).—The bees have Acarine disease.

J. W. (Hants).—(1) Acarine disease. (2) Better spray them with a disinfectant first.

Bee Shows to Come.

May 24-27 at Guildford.—Surrey B.K.A. Show. Two Challenge Trophies, Apis Club Silver Medal, B.B.K.A. Silver and Bronze Medals and Certificate, Surrey B.K.A. Silver and Bronze Medals, Open Classes Honey, Wax, Appliances, etc., Demonstrations, Lectures, etc.—Hon. Secretary, W. E. Hamlin, 43, Norbury Court Road, Norbury, S.W.16.

Royal Show, Cambridge, July 4 to 8.—Over £40 in prizes. All classes open. Schedules and all information from Mr. E. C. R. Holloway, Burwell, near Cambridge. **Entries close May 20.**

July 26-27, at Cardiff, Sophia Gardens.—Glamorgan Bee-keepers' Association, in connection with Cardiff and County Horticultural Society's Show. Open Classes. Special prizes: Taylor's W.B.C. Hive and Apis Club Bronze Medal.—Schedules from Secretary, Chas. F. Davies, 5, Borstal Avenue, Cardiff.

Special Prepaid Advertisements.

One Penny per Word.

Trade *advertisements of Bees, Honey, Queens, and Bee goods are not permissible at above rate, but will be inserted at* **1½d.** *per word as* **"Business"** *Announcements, immediately under the Private Advertisements. Advertisements of Hive-manufacturers can only be inserted at a minimum charge of* 6s. *per* ¼*in., or* 12s. *per inch.*

PRIVATE ADVERTISEMENTS are only intended for readers having **Surplus Stock** *to dispose of.* **Driven Bees, Nuclei,** *and* **Queens that are reared or imported for sale,** *are Trade Advertisements, and can only be accepted under trade terms. A charge of* 6*d. extra per insertion will be made if a box number is used.*

PRIVATE ADVERTISEMENTS.

THREE strong 10-frame Stocks Italian and Italian Hybrids, healthy, April-May, 75s., carriage paid; box 10s. extra, returnable.—BIRD, 40, Frederick Road, Cheam. a.b.

TWO strong 8-framed Stocks Italians, 65s. per stock, April delivery; healthy, crowded brood; boxes 10s. extra, returnable. — STEVENSON, Egleton, Oakham. c.85

SWARMS wanted, April-May; weight and quality guaranteed.—Offers to "BEE-MASTER," 1, Park Crescent, Sheffield. c.86

ANNUAL SWEET CLOVER (Hubam).—Packet of Seed, 3d. Three Stocks of Bees for Sale, £2, £3 and £4 each.—WALKER, Portway, Street, Somerset. c.88

OWING to failing health I must sell my Italian Bees and W.B.C. Hives. Bees strong and healthy, 1921 Queens, hives nearly new, just repainted. What offer? — DOBSON, Hunton Bridge, Herts. r.c.89

HONEY suitable for bee food or manufacturing purposes, £2 per cwt.; sample 3d.—MRS. YARRAD, The Laurels, Swaton, Billingboro'. c.90

CHANNEL ISLES.—Model Apiary for Sale; "Isle of Wight" disease unknown; no rival apiarists; good local sale for honey at big price; good breeding station for export; capable of extensive enlargement; opening for poultry farming in conjunction; lovely climate; exceptional opportunity.—PENROSE, Havelet, Guernsey. r.c.91

SALE, four Hives, British Standard, good condition and clean; best offer.—JACKSON, 16, Windsor Street, Bletchley. c.92

FOR SALE, two strong Stocks on 10 frames, Italian Hybrids; also Hives. What offers?—W. CAIRNES, Southill Gardens, Southill, Beds. c.93

EGGS, per dozen, box returnable.—Agnew's Champion Black Orpington, 18s.; Barron's White Wyandotte, 15s.; Carter-Hunter White Leghorn, 10s.; Taylor White Runner Duck, 10s.; Utility Fawn Runner Duck, 7s.; packed, carriage paid; excellent layers.—GRISELDA CHEAPE, St. Andrews, Fife. r.c.94

TWO strong Dutch Colonies, April delivery, £4 each, or nearest offer.—MISS CHEAPE, St. Andrews. r.c.95

OVERSTOCKED.—"Every colony wintered." 10-frame Stocks pure Italians, Penna or Buckfast 1921 Queens, delivery April, 75s., carriage paid. —WADHAM, 5, Gold Street, Cardiff. r.c.109

3 CWT. finest Buckinghamshire Honey from the Chiltern Hills—28 lbs., £2; 56 lbs., £4, 1 cwt., £7 10s., or £21 the lot; carriage forward; tins free. Also three exceptionally fine, healthy Stocks, Italian Hybrids, 10 combs packed with stores, brood and bees; no disease; delivery early April; £4 10s. each.—STEVENSON, Thames View, Flackwell Heath, High Wycombe, Bucks. r.c.110

WANTED, good Galvanised Iron Tank, about 160 gallons; exchange clean standard frame hives.—W. A. WOODS, The Firs, Normandy, Guildford. c.115

FOR SALE, five Stocks of Bees with hives and accessories at £5 a stock. Only sold on account owner shortly going abroad. No reasonable offer refused. — Apply, LT.-COLONEL BADCOCK, Hadleigh, Farnham Common, Bucks. c.122

TWO 6-frame Stocks Italian Hybrids, 1921 Queens, April-May, 60s.—WALLACE, Hedenham Lodge, Bungay, Suffolk. r.c.46

17 STRONG Italian Hybrid Stocks, £3 10s. each, April delivery; guaranteed healthy; travelling boxes 10s. extra, returnable.—H. YOUNG, 42, James Street, Cambridge. r.c.52

20 ITALIAN STRONG STOCKS for Sale, guaranteed free of disease, Penna and Bozalla Queens, 80s., carriage paid, in returnable travelling box, 10s. Honey, finest quality, in 1-lb. screw top bottles, 1s. 9d. each, packed free on rail.—WALKER, Symonds Hyde, Hatfield, Herts. r.c.49

ONE Pedigree White Leghorn Cock, 11 months, 15s.; one Conqueror pattern Hive, sliding brood and shallow frame chambers, clean and well painted, 25s., free on rail; four sets of 10 Brood Frames, each with drawn-out combs, 20s. per set; good, well painted and clean Hives, 15s., 17s. 6d.; Shallow Frame Cases and 8 frames of Comb, 10s. 6d. each; Section Racks, filled with combed sections and metal separators, 8s. 6d. Cash with order.—W. A. WOODS, The Firs Apiary, Normandy, near Guildford. c.113

SELL.—Rotax all-brass Motor Car Head Lamps, self-contained acetylene, very powerful, 30s. the pair; two small powerful Acetylene Brass Head Lamps, with separate generator, suitable light car or cycle car, £3 the set; Austin Rear Wind Screen, mahogany framework, £7; set of Withers' "Lubrigait" patent Spring Gaiters for Austin 20 car, used only a few months, £4; Mills' Automatic Acetylene Generating Plant, suitable for 10-roomed house, £6; quantity of Acetylene Gas Brackets and Chandeliers, prices with particulars; small folding Magic Lantern, 30s.; single barrel .410 Gun, 30s.; motor cycle all-rubber Ponco, reaches to ankles, wind- and weather-proof neck and sleeves, 50s.; all carriage forward.—HERROD-HEMPSALL, Old Bedford Road, Luton, Beds. c.77

FOR SALE, two Hives with frames and all the apparatus for bee-keeping.—Apply, after 4 p.m., 292, Willesden Lane, N.W.2. c.84

IN CONSEQUENCE of the Herefordshire County Council giving up their Restocking Scheme, the Apiary is for disposal. Italian or Italian Hybrids, all good, healthy 10-frame Stocks, all 1921 Queens, either with or without hives, without hives sent in special travelling box carriage paid to nearest station, 70s.; box charged 10s. extra, which will be returnable and cash allowed when received. Also 200 drawn-out Shallow Combs, 1½ top bars, perfectly healthy, 18s. 6d. per dozen, carriage paid. Orders booked in rotation. Cash with order.—J. ARNFIELD, Arncroft, Brenton, Hereford. r.c.59

YOU CANNOT EXPECT EGGS unless you keep birds that have been bred for egg production. Chicks, White Leghorn (Lady Eglantine strain), Leghorn-Wyandotte (Snowden's), Light Sussex, 16s. dozen; sittings, 8s.—COBB, 33, Bevan Road, Plumstead. r.c.85

AMERICAN GOLDENS.—Surplus Stocks for disposal (Brockwell's strain), price according to number of combs. References may be obtained from Mr. J. Price, the County Instructor.—Particulars, J. BRACKEN LEIGHTON, 2, Henry Street, Stafford. r.c.3

SEVENTH YEAR of successful wintering through selected strain and qualities. Can recommend a few Stocks of Hybrids or Italians, 10-frame, £3 12s. 6d.; 8-frame, £3; carriage paid. —BALE, 1, Hodford Road, Golders Green, N.W.11. r.c.5

SURPLUS ITALIAN STOCKS, delivery May. Honey Press, scarcely used, 25s.; excellent Honey, £7 cwt., free.—DOUPE, Maam, Galway. r.c.2

FINEST NORFOLK HONEY, granulated, £6 cwt. on rail; tins free.—ISAAC SOUTHERLAND, East View, Brancaster Staithe, Norfolk. r.c.6

GOOD GLAZIER'S DIAMOND, perfect, 8s. 9d.; double .12 bore Breechloader, perfect, 98s. 6d. —HUBBARD, Northkilworth, Rugby. r.c.15

SWARMS.—Orders coming in fast, but can still book a few more at 30s., carriage paid. Cash with order.—HALFORD, West Wratting, Cambs. r.c.38

TWENTY strong 10-frame Stocks Italian Hybrids (Simmins' strain), April delivery, 60s. each, carriage paid; approval; deposit; box 10s., returnable.—ERNEST GRIFFITHS, Helsby, Cheshire. r.c.33

COMPLETE MODERN APIARY FOR SALE, consisting of 40 strong Italian Stocks (1921 Queens), in nearly new 13-frame Hives, zinc-covered roofs, each hive fitted with excluder and two supers; 4-frame Extractor, Ripener, Feeders, etc.; carriage paid in Great Britain; April delivery; £300, or near offer.—Box 48, B.B.J. Office, 23, Bedford Street, Strand, W.C.2. w.11

VERY finest quality Hampshire Honey for Sale; 5 cwt. in assorted size tins.—Box 50, BRITISH BEE JOURNAL, 23, Bedford Street, W.C.2. a.24

BUSINESS ADVERTISEMENTS.
(1½d. per word.)

THE WISE BEE-KEEPER looks for quality. The South Hampshire Apiaries breed only from the very best strains. Result: Quality and satisfaction. Beginners' Outfits from £5.—All communications, H. E. NEWTON, New Milton, Hants.

"CARRIAGE PAID."—Honey Jars, screw tops, 39s. 6d. gross.—ERNEST GRIFFITHS, Helsby, Cheshire. r.c.97

"WIGHT" AND "ACARINE" DISEASES.—Prevention and removal; invaluable advice; 5s. 6d. "An eye-opener."—ALF. RYALL, 8, Ospringe Road, N.W.5. r.c.87

THE ONLY ADVERTISING ACTUAL MAKER of Bee Hives of any kind between Cape Wrath and the Mersey, in the West. THE SOLE MAKER of the Convertible Unitive, the "CLYDE" HIVE, and the Casement (Indoor) Hive in the United Kingdom.

The ONLY MAKER in the United Kingdom who can supply hives with the "B" Floorstand, which gives instant confinement for transport, with ventilation, a compact hive for economical loading, a hive with a flexible entrance and with summer weather ventilation and a wide alighting area, and the unique facilities for administering vapour treatment for Acarine disease.

Introducer, and thus far the only maker, of the either-purpose Rack, and the B double-purpose Section/extracting Frames.

Five descriptive brochures, with prices, 32 pp., 'cap. 8vo., on receipt of 4d. stamps from

JAMES B. BALLANTYNE,
HAZELBANK, LANARK.
"THE NEW FIRM."

c.102

BEAUTIFUL QUEENS, Colonies, Nuclei, Swarms. Grand value. Booklet free.—BOWEN, Apiarist, Cheltenham. c.101

ITALIAN AND HYBRID NUCLEI from Penna and other excellent selected strains, 1922 fertile Queens, 5 frames, May 37s. 6d., June 32s. 6d., carriage paid. MOORE, 31, Monmouth Road, Dorchester. r.c.105

MIDDLESEX BEE-KEEPERS' ASSOCIATION.—A Course of six Lessons in Practical Bee-keeping will be given at the Model Apiary, S. Mimms. Inclusive fees: Members of the Middlesex Association, 7s. 6d.; non-members, 10s. 6d.—Syllabus and dates can be obtained from the HON. SEC., Middlesex Bee-keepers' Association, 23, Bedford Street, W.C.2. r.c.107

STRONG THREE-BAND ITALIAN NUCLEI, May and June, 30s., delivered.—COOMBER, Westcliff. c.112

DUTCH-ITALIAN HYBRIDS 4 frame Nuclei, £2 10s. These bees have proved most wonderful working and disease-resisting strain. No better bees can possibly be obtained, and owing to such a great demand on this strain last year I have only a limited number for disposal. Also Italian and Dutch, £2 5s., carriage paid. Cash with orders. Stamp reply. Apiaries at Ashford, Halliford, and Walton.—SEALE, Ashley Warren, Oatlands Chase, Walton-on-Thames, Surrey. r.c.116

STOCKS genuine Swiss Bees still for Sale, as advertised in BEE JOURNAL, February 9.—DAVIDSON, Forest Road, Burton-on-Trent. c.120

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GRAFTON hardy, prolific Italians will please you. Fine early Nuclei from £2. Queens.—MASOM & HEDLEY, Grafton Regis, Stony Stratford. c.98

"LAZENBEE" PROLIFIC ITALIANS.—Booking now. Few choice 3-frame Nuclei, 30s. Early delivery.—KENDALL YOUNG, 109, Elms Apiary, Sudbury, Middlesex. c.99

SPECIAL OFFER.—Strong, healthy 10-frame Stocks, Italians (approval, deposit), £4, carriage paid; Swarms, 10s. 6d. per lb.; boxes 10s., returnable.—LONGLEY, 35, Tharp Road, Wallington, Surrey. c.100

3-FRAME NUCLEI, Simmins, Penna, Bozzalla, 35s., June delivery; satisfaction guaranteed; returnable boxes, 10s.—MISS CHADWICK, Narborough, King's Lynn. c.96

THE BEST INVESTMENT is an Ambrosian 6-comb Stock.

AMBROSIAN STANDARD SWARMS, 3 to 4 lbs., 45s. Guaranteed delivery May 1 to 15.

THE AMBROSIA APIARIES, S. Farnboro', Hants. c.103

IMPORTED 1922 ITALIAN QUEENS, 10s.; Nuclei, 3-frame 35s., 4-frame 45s., headed imported Queens; May delivery; cash with order; rotation.—HENSLEY, Seeton Apiary, Chatham. c.106

FEW GOOD NUCLEI, headed by splendid Italian or Dutch Queen, 3 frames, 35s.; 4 frames, 40s.; May delivery.—SMALL, Moorlands, Harpenden. r.c.104

NINE ITALIAN STOCKS with 1921 imported Queens, £3 11s.; eight with 1922 Queens, £3 15s.; six Hybrid Italian Stocks, 68s. 6d.; several 5-frame Nuclei with 1922 imported Italian Queens, £2 each; all carriage paid; spring delivery, and 15½ in. top bar to standard frame to suit "Wormit" commercial hive, of which I have had some hundreds in use for 16 years. State if clipped or unclipped queens are required.—THOMAS, Burwell, Cambs. r.c.121

SEVERAL STOCKS OF ITALIAN BEES, headed by Queens, the best obtainable.—8 frames, 80s.; 6 frames, 60s.; 4 frames, 45s.; Italian Hybrids same price; guaranteed healthy; box 10s. extra, returnable.—MYTTON, Lyncroft Apiary, Stafford Road, Lichfield. r.c.123

25/-.—WELL-KNOWN Breeder offers limited number 3-frame Nuclei of excellent working strain Italians, with young fertile Queen, delivered end of May-June. Box 56, B.B.J. Office, 23, Bedford Street, Strand, W.C.2. r.c.124

COLONIAL HONEY FOR BEE-FEEDING.—Australian new white, 60-lb. tin 39s., two tins 77s.; finest West Indian, 56-lb. tin 41s. 6d., two tins 75s.; carriage paid Great Britain.—LONDON TRADING AGENCY, 32, St. Mary Axe, London, E.C.3. r.17

Orders booked now for April Stocks. Catalogues now ready. PEARSON & GALE, Marlborough.

CHOICE GOLDEN ITALIAN QUEENS, home-bred, hardy, best and cheapest, from 10s. each.—COOMBER, 64, Ronald Park Avenue, Westcliff-on-Sea. c.111

BRITISH STANDARD 3-FRAME NUCLEI, £1 17s. 6d.; 8-frame Stocks, £4; 16 x 10, £2 2s. and £4 4s.; delivery April-May. R. P. SIMS, Lyncot, Downs Road, Coulsdon. c.80

ORDERS booked for 3-frame Nuclei, 35s.; Swarms and Stocks, prices of latter according to requirements.—THE FIRS APIARY, Normandy, near Guildford. c.114

OURS ARE JUST GOOD BEES.—Not the miracle working super-bees one hears about, but just the highest grade of pure Italians Certainly as good a strain of hard-working little Bees as we have met (or had authenticated evidence of). Perhaps Stocks or Nuclei of these are what you want? Our original guarantee against Acarine disease still holds good.—WELSH BEE GARDENS, Brecon (Proprietor, Lt.-Colonel Weaver Price). We like helping beginners. r.c.71

QUEENS of world-famed American-Italian strains ensure immunity to Acarine disease under rational management. Booklet on "Rational Management and Prevention of Disease," 2d.—STURGES, Shenstone, Hartford, Cheshire. r.c.72

IMPORTED CARNIOLAN QUEENS.—Reduced prices. List, stamped, addressed envelope.—WOODLEY, Thorne, near Doncaster. r.c.58

NOW IS THE DANGEROUS TIME.—4 lbs. Candy, 4s. 6d.; 10 lbs., 9s. 9d.; plain or floured.—COBB, 33, Bevan Road, Plumstead. r.c.81

DUTCH BEES, in skeps, £3 10s.; Swarms, 25s. to 35s.; Stocks and Nuclei, standard or commercial.—COBB, 33, Bevan Road, Plumstead. r.c.82

NUCLEI.—3-frame Simmins', pure Italians or Carniolans, 40s.; Hybrids, 30s.; carriage paid; 10s. deposit on returnable box; delivery June.—HOWLETT, "Sylvabelle," Tring. r.c.7

"DAILY MAIL" BEE HIVES, complete or in the flat.—TROY & CO., LTD., Iverson Road, Kilburn, N.W. r.c.18

EXCEPTIONALLY productive and healthy strain. Two stocks produced over 600 lbs. of honey in one season. 5-frame Nuclei of this strain now offered for April-May delivery at the special rate of 40s. (carriage paid), plus 10s. deposit on returnable box.—CHIVERS & SONS, LTD., Histon, Cambridge. r.c.16

FINEST ITALIAN NUCLEI, headed by Cannell's imported 1922 American Beauty Queens, 3-frame, 45s.; 4-frame, 55s.; carriage paid; travelling boxes returnable; satisfaction guaranteed.—HOGAN, Boxford, Suffolk. r.c.25

STRONG, healthy Stocks Dutch Bees in skeps for Sale, delivery March, April.—DAVIDSON, Forest Road, Burton-on-Trent. c.35

SWARMS BOOKED, May delivery, Italian Dutch, Carniolan, £1 12s. 6d.—DAVIDSON, Forest Road, Burton-on-Trent. c.36

ITALIAN and Hybrid Stocks and Nuclei for Sale, strong and healthy, delivery April, May, low prices. — DAVIDSON, Forest Road, Burton-on-Trent. c.34

ALBERT HOPKINS, Breeder, Importer best Italian Stocks, Nuclei, Queens. Satisfaction guaranteed. Prices moderate, application. 25 years' practical apicultural experience.—Woodland Valley Apiary, Lyminge, Kent. r.c.26

EXCELLENT opportunity for Pupils to learn honey production on a range of apiaries; premium required.—THOMAS, Burwell, Cambs. r.c.39

FERTILE ITALIAN QUEENS, the best, April, 12s.; May, 10s. 6d.; 4, 38s.; 6, 56s.; 12, 96s. Special quotations 25 to 100 queens. Safe arrival guaranteed.—ATKINSON, Fakenham. r.c.40

ITALIANS.—Nuclei, 1922 Queens, 3-frame, May 40s., June 32s.; Colonies, spring delivery, 6, 8, 10 frames, 50s., 62s., 73s.; carriage paid; returnable crates.—ATKINSON, Fakenham. r.c.41

BRITISH bred Italian Nuclei and Queens. Prices on application. — CHARMAN BROTHERS, West Hill Apiary, Brookwood. r.b.4

WICKHAM BISHOPS ASSOCIATION is now booking orders for early delivery. Prices: 5-frame Nuclei, 50s.; Stocks on 10 frames, 75s.; Swarms from 25s.—Address, BEE-KEEPERS' ASSOCIATION, Wickham Bishops, Essex. r.b.76

BUCKFAST QUEENS are the very best. 1922 Circular and Price List sent free on application.—REV. BR. ADAM, Buckfast, S. Devon. r.b.81

HAVE YOU READ "THE BEE WORLD"? If not, why not? Every number in itself is a useful literary work for practice and reference. Specimen copy free.—Offices: THE APIS CLUB, Port Hill House, Benson, Oxon.

QUEENS by return from April till October.—PEARSON & GALE, Marlborough. w.14

NEW HARDY YELLOW VARIETY.—No loafers hottest days. Gathered honey 1921 after all others had retired from business.—Particulars, S. SIMMINS, Queenland, Heathfield, Sussex. r.a.13

JACK TICKELL.—For Queens, Stocks and Nuclei. List free. — Westbourne Apiary, Cheltenham. r.a.54

DUTCH BEES.—Send for my artistically Illustrated Catalogue outlining my method of managing bees profitably. Read my notes on Queens and Queen Rearing. Will interest the expert and amateur. Free for the asking.—WHYTE, Bee Farm, Cumbernauld Station, Dumbartonshire. r.b.32

STRICTLY BUSINESS.—One dozen Flavine—S Powders, 1s.; a Japanned Sprayer, post free, 6s.; a Floorboard Feeder, to fit under any hive, 10s., post paid.—S. H. SMITH, 30, Maid's Causeway, Cambridge. c.65

THE ACARINE 1921 ECLIPSE PAD.—It knocks out mites and moths. Your money back if not satisfactory. Price 5s., post paid.—S. H. SMITH, 30, Maid's Causeway, Cambridge. c.66

BEE CANDY,

7-lbs. post free 7/6 10-lbs. 10/6

Reduction for further quantities.

S. J. BALDWIN, BROMLEY, KENT.

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Let BOWEN'S INCOMPARABLE CANDY See Your BBBB Through. 7 lbs., 8/- 10 lbs., 11/-

Lt. A. H. BOWEN —QUEEN SPECIALIST— CHELTENHAM.

ARTISTIC BOOKLET FREE.

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BOOK NOW!—Choicest home-bred Carniolan Queens for 1922.—PEARSON & GALE, Marlborough. b.24

ADMINSON'S SEMI-COMBS.—Nuclei on these combs from mid-May at cheapest rates.—PEARSON & GALE, Marlborough. r.b.66

GORDON ROWE, 28a, Moy Road, Cardiff. 'Phone: 2422. Tel.: "Sunflower, Cardiff."

PARCHMENT CONTAINERS, stamped "Fine Lemon Curd," offered at half price to honey producers who can affix labels over the printing, 1 lb., 4s. 9d.; ¾ lb., 4s.; ½ lb., 3s. 6d.; ¼ lb., 2s. 3d. per 100. Also plain 2 lbs., 14s.; plain 1 lb., 9s. 6d. per 100. Add for carriage 1s. 6d. to each 5s. value ordered. Pure Honey for bee feeding, etc., 60-lb. tins, 50s. cwt., f.o.r. Terms cash. Samples 6d.

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Attend the

DUTCH BEE MARKET
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The first of its kind ever held in Britain.

Hundreds of SKEPS and STOCKS will be there for the inspection of Buyers.

PRICES TO SUIT EVERYONE.

Mr. Whyte and Mr. Hans Matthes will be in attendance all the time to meet bee-keepers.

Bear in mind Dutch bees are resistant to disease beyond all others. Dutch bees are prolific. Dutch bees hold the record for Honey production and Dutch bees winter better than any. Meantime, send for my Illustrated Catalogue, it will interest and pay you.

WHYTE, Bee Farmer,
Cumbernauld Station,
DUMBARTONSHIRE.

SKIPWITH CANNELL is pleased to announce that **American Beauty Nuclei** can be obtained for Spring delivery from

Mr. HOGAN, Boxford, Suffolk (See Business Advertisements.) Please order direct from him.

My 1922 American Beauty Breeding Queen has already brood in five combs (2,000 feet above sea level!). Her stock gave 117 lbs. of honey and 9 lbs. of bees in a year so poor that many stocks headed by queens of other strains failed even to secure their winter stores! Quality counts.

An American Beauty

May	June	July	Aug.—Oct.
12/-	10/-	9/-	—

Safe arrival, prompt service and satisfaction guaranteed, of course——also gentleness, activity, beauty, hardiness, and disease resistance; blood will tell! I never mail a queen I wouldn't *like* to keep.

SKIPWITH CANNELL, The American Breeder of **American Beauty** Queens,
Aux Sieyes, par Digne, B.A., France.

INSTRUCTION in BEEKEEPING
PRACTICAL AND THEORETICAL

My Apiary will be open for a limited number of pupils during this season. Terms and particulars from

W. HERROD-HEMPSALL,
The W.B.C. Apiary, Old Bedford Road, Luton, Bedfordshire.

The Wise Bee-keeper

Will look ahead and prepare Now for the coming season. We have made big reductions in prices and our 1922 Catalogue ***is now ready,*** and if you have not received a copy send a post card now and it will be sent post free by return.

Our Famous Prize Bee Candy

Prices :—**1/-** per lb., post 9d. ; 4lb. **5/-** post free ;
7lb. **8/-** post free ; 10lb. **11/-** post free.
In 1-lb. cakes or 2-lb. Boxes with glass top, as desired.

Hubam Clover Seed.

We are importing a quantity of this famous honey-bearing plant, and can supply at **10/-** per lb., post paid. Orders supplied in rotation.

R. STEELE & BRODIE, ***Wormit Works,***
Telegrams :—"Bees, Wormit." **WORMIT, FIFE.** **Telephone :—28 Wormit.**

The Premier Quality. Facts Tell.

"The only hive I have left is the one I introduced your 'White Star' queen to last June. One neighbour has lost 10 stocks; another 3 out of 6. To-day *your* queen's stock is working hard." R. F.
Warrenpoint, March, 1922.

Another client ordering W.S. bees for current season says: "I have had very bad luck with the ordinary *commercial* bees, and now intend to try for the last time with the best." J. P. L.
Regent's Park, March, 1922.

"In the year 1920 I received one of your 'White Star' 3-frame nuclei, and although the season was very bad, as you well know, I did exceedingly well with your bees, and am desirous of a further supply. Please send as enclosed order for self and a friend."
Stairfoot, March, 1922. C. W.

Thousands of such warning and convincing letters are received, and tell only too plainly which way the weather vane points to those who wish to avoid wholesale losses.

List free: 20 p. annual 4d. S. SIMMINS, Queenland, Heathfield, Sussex.

BRITISH RED BUSINESS BEES In Isolated Apiaries

Pure Carniolans.

Special breeders for Season 1922 are mated to drones from Colony that produced 240 lbs. honey.

Fertile Queens	10/-
Virgin ,,	5/-
3 comb Nucleus	45/-
5 ,, ,,	65/-

J. E. SWAFFIELD, *Carniolan Specialist Breeder,* **Cheltenham**

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NOW READY. **Write for a Copy, post free**

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The Bee-Keepers' Calendar.

MARCH, 1922

23 Thursday. "Much have I thought of life and seen
How poor men's hearts are ever light;
And how their wives do hum like bees
About their work from morn till night."
W. H. Davies, "Money."

24 Friday. "It's a' for the apples he'll nourish the tree;
It's a' for the honey he'll cherish the bee."
Burns, "Meikle Thinks my Love."

25 Saturday. Begin slow feeding if the weather is mild; this stimulates the queen to lay.

26 Sunday. "The bee, proud of possessing a venomous dart, prayed that the sting might be mortal. No, said the Almighty, and since thou art so ill-disposed, it is thyself who shall die after having stung."—*The Koran.*

27 Monday. "The school-house murmuring with its hive-like swarm."
J. G. Whittier, "The Panorama."

28 Tuesday. "Shape me, she said, high walls with tracery
And open ogive work, that scent and hue
Of buds and travelling bees, may come in through,
The note of birds, and singing of the sea,
For these are much to me."—
Thomas Hardy, "Heiress and Architect."

29 Wednesday. "And yet—the pines sing overhead,
The robins by the alder-pool,
The bees about the garden-bed,
The children dancing home from school."—
Charles Kingsley, "Sept. 21, 1870."

Diseases of Adult Bees.

We congratulate the Apis Club on its enterprise in getting Dr. John Rennie, F.R.S.E., to lecture on the present position of research on this subject. No one is better qualified to do so, and Dr. Rennie had a large and a very attentive audience at the Central Hall, Westminster, on February 25, when he gave the lecture. We are unable to give a verbatim report, but give the main points in Dr. Rennie's lecture.

The chair was taken by Mr. J. B. Lamb, who, in introducing the lecturer, said: "It is usually the duty of the chairman of the meeting to introduce the lecturer to the audience, but Dr. Rennie is too well known to all of you, and his writings on the diseases of adult bees so widely read in the *Bee World*, I give him a cordial welcome in your name.

"We appreciate his kindness in coming so far to give his lecture; I must also call

attention to the kindness of the Apis Club in organising this meeting, and giving us this opportunity to learn the present position of adult bee disease research."

Dr. J. Rennie, who was greeted with applause, said: "I have come a long way to give this address, but I should like to say I come gladly. It is rather a relief from the rather strenuous routine of examining bees to find out if they have Acarine disease or not. I feel when one has worked in this way it is always good to come up against the practical mind. It is good for the practical man to learn of the scientific mind; and, on the other hand, the scientific man requires the experience of the practical man. The scientific mind sometimes requires correction, and I anticipate some of you will have something to say or question to ask at the close of the lecture.

"The first thing to mention, there is nothing more desirable than that we should have an audience quite clear to this problem of the diseases of adult bees which many practical bee-keepers and others have experimented on and discussed."

Dr. Rennie then dealt with the symptoms of sick bees, and said the failure to distinguish between a disease of the individual and of the community had led to much confusion of mind. The most noticeable external symptoms of disease, inability to fly, crawling bees, etc., were not always due to the same cause. Dr. Rennie pointed out these symptoms did not mark the commencement of disease, but on the other hand showed that it was then far advanced. Bees may have crawled last week, and the week before that may have robbed out a neighbour's hive of diseased bees. To say that the crawling was a result of the robbing was nonsense; the disease was present months before, but was unrecognised.

(To be continued.)

A Dorset Yarn.

"Nature, a mother kind alike to all,
Still grants her bliss, at labour's earnest call."

Lines of plum trees bursting into blossom show that Nature is kind to the Dorset yarner. The dry season of last year has ripened the wood, so that they have produced fruit buds in abundance. If this is so with our lot it is the same with other fruit growers, but the satisfaction of seeing so many bursting flowers well repays the labour of planting them. Cold winds have been against all flowers, and nothing is plentiful but willows. Bees did not go far for nectar and pollen until last Thursday, March 16, when it was clear and warm, and they flew away to the copse where willows were very plentiful. Many came home laden. Wherever the alighting board is large and not unduly sloping they landed safely, but in one instance, where it was short and sloping, they dropped on the ground and some did not get in at all. Where the bee-keeper is away from plum and peach trees, and away from flowering willows, his bees must be short of stores; so many rough, windy days have made them use largely from their own, but if they are near plenty of willows there will be no scarcity, if some of the days are fair.

Going twice in one week to Dorchester, one sees a great deal of this genus. In many places the greater part of the hedgerows are willows. One can see that they were planted from cuttings, as they are in batches of male and female. In waste land, where they have sown themselves, both sexes are mixed up together. Kerner, the naturalist, says that "this family rarely deviates from the true form." Mr. MacPhail, our horticultural instructor and bee expert for Dorset, found one with the inflorescence half as long again as the common variety. He took home some cuttings; they are now in flower, and very beautiful they are. His bees were on them as late as 4 p.m. on Saturday, March 18. We travel on miles of Dorset roads, but rarely ever see stocks of bees, yet there is such a harvest for them. The road from Lychett Minster to Bere Regis (a tract of poor quality land) is just now very interesting to the bee-keeper; the land belongs to the large estates, and has but a few houses. Very little of all these miles are producing foodstuffs for the nation, these can only be got by labour; wild flowers will come of their own accord, and the only harvest of food from them is by bees, without them the honey is wasted. Labour on derelict land soon produces food for man, soon changes it from the wild. During this last thirty years I have seen many acres of heath and willow reclaimed from the wild. One tract last season was planted with sweet peas and asters. "This land that was desolate is become like the Garden of Eden." All this comes with labour. Look at the Board of Trade Returns each month. Besides thousands of pounds paid for honey from abroad, there are thousands for flowers, thousands for vegetables, thousands for fruit, which our land would produce if only one could get access to it and houses to live in.

"Nature, a mother kind alike to all,
Still grants her bliss, at labour's earnest call."

Now the wealthy owner may shoot a few brace of snipe on the wet lands, a few pheasants and other birds of dry lands and woods. A few luxurious dishes for the owner, but nothing for the toiling millions of our people. If there are no dwellings for the people, there cannot be the opportunity for them to harvest the honey that is wasting every year in the rich man's woods and wastes.

The village adjoining this has the greater number of its people working small holdings. Most of them take their produce to Poole and Bournemouth, and sell it themselves. None of them are wealthy, as two days they have to be away from the farm to sell their

produce, but they are happy in their laborious work. Their wives are proud of their poultry; they will string off the number of eggs they get each week, the great number of young poultry and ducks they sell throughout the year. One of the first things they want you to see is the pig. Here there is no waste; what vegetables are not good enough to sell are given to pigs and cows; the skim milk soon fats the pig, but in the whole village there is only one bee-keeper; he has eighteen stocks and a motor-car. Nearly all are working their holdings themselves, and live on what they produce; a few of them make hurdles and do wood work as well as the land. Sturdy, self-reliant workers, who lost twenty-six of their sons in the war, these are all producing foodstuffs on their small holdings. A splendid bee country. Mr. Jenner, with his eighteen stocks, is one of those who always keep water close to the hive, and always keep it sweet with sugar, so that bees should not go to the ditches for stagnant water. Here no "unwieldy wealth and cumbrous pomp repose, and every want to luxury allied"; here they are all toilers for the nation's good, all are producing something to feed the people of Poole and Bournemouth, where there are thousands of people over miles of roads living close together, where everything they grow can be disposed of. These men know that

"Nature, a mother kind alike to all,
Still grants her bliss, at labour's earnest call."

At Southampton last week I was privileged to meet Mr. G. H. Robins, of St. Denys, and Mr. Donohou, two Hampshire bee-keepers. The latter closed down one of his stocks with two queens, one black, the other Italian; they had each been together some time. It will be interesting to see how they start this season; he has no excluder between them.—J. J. KETTLE.

Jottings from Huntingdonshire

Pox bloom, yew blossom, elms and hornbeams loaded with flowers, with the blackthorns smothered with florets milky white, dandelions, celandines and coltsfoot blooming apace, and the sallow catkins all a-smother with pollen dust, are giving the bees as much as they need in nectar and pollen, and if the weather were always right, feeding might cease. But the weather is not always what the bees would wish. The weathercock on the steeple top has been looking northward for several days, and while the warmth of the sun has pushed forward the growth of spring, the bees are chary—they do not like north winds. A yew tree and half a dozen box bushes close to the hives have kept the Dutch bees busy, and one stock of Italians have even sent foragers farther afield: as for the rest, they have been content with a few cleansing flights and pollen from the artificial pollen stores placed about mostly peaflour. With all respect to Strgar the Carniolans here hate a north wind. In speaking of these gentle creatures—while I agree with Strgar as to the good natured disposition of Carniolans if they are pure once they get crossed with Italian or Dutch, beware! Carnidan bees have a remarkable sting, which is kept in subjection during the stage of purity; but when that sting appears in a hybrid 'hush!' I can almost feel it as I write.

The time is near when our hives will all get spring cleaned, if that is not already done. Two of my stocks are supered, and honey went up last week; but 'twill all go down again this. Honey stored in supers in March rarely stays to get ripe and sealed over, a cold north wind or a sunless day and down it all has to go. It is well to super even in March, when the brood nest is choked with bees, which may not ascend five days out of seven; but a very sunny hot day comes along and up they go in thousands.

Which is the best place to put a cloth saturated with disinfectant? I see a writer in last week's Journal suggests the alighting board. Personally, if I had a diseased stock I should be inclined to treat from above. It is extraordinary the number of bee-keepers who cling to the idea of bees drawing air into the hive through the entrance: the opinion being that ventilating bees draw fresh air into the hive in this manner, while all the time they are actually expelling air through the hive entrance. The duty of the ventilating bees is the expulsion of foul air. This done the incoming of pure air will take care of itself. Hence, why I should say to anyone troubled with diseased bees, treat from above; at the alighting board, too, if you like, but above, certainly. Many bees at this season of the year are apt to be in an otiose condition. This need not distress the owner unless the whole colony is in a state of lethargy. Those bees who were hatched last August will be quite worn out now, and, moreover, many bees get chilled during frosty nights. But a colony that was quite idle on a warm, sunny day should be examined. Where there are plenty of young bees they will come out and take flight immediately; where the majority are those born last autumn, there will be halting on the alighting board. The latter condition of things will soon pass if the queen is good and disease absent. Dysenteric conditions, again, do not always mean the presence of *Acarinus* or *Nosema apis*; but it is a condition which should be watched. Food will often cause dysentery, especially honey in a state of spissitude, which beforehand has been impregnated with honey dew. The great obsession just now should be—see that your stocks are strong. Where they are weak and uniting is not desired, requeen in April. The extra cost of an April queen will be repaid ten times over before the summer season has passed, so why hesitate and count the cost of a few extra shillings which, spent at the right time, may mean the salvation of a stock which should be worth at a modest estimate 30s. or more? Give your bees a fair chance! Don't hamper them or handicap them. If you want honey, so much depends on you.—E. F. HEMMING, Steeple Gidding.

British Bee-Keepers' Association.

LECTURES AT GOLDER'S HILL PARK.

A special course of six lectures on bee-keeping will be given in the British Bee-Keepers' Association Apiary, London County Council Park, Golder's Hill, London, N.W., on Fridays, April 21, 28, May 5, 12, 19, 26 at 6 o'clock each evening.

Those desiring to attend these lectures must make application at once for enrolment and enclose the fee of 10s. 6d. for the full course to Mr. Herrod-Hempsall, Hon. Secretary, 25, Bedford Street, Strand, W.C.2.

Novelties for 1922.

THE DENNIS COMBINED BEE-FEEDER.—PATENT NO. 175,512.

This feeder as described in the "B.B.J." for June 23, 1921, has been improved, and the Patent Specification now embodies novel features that increase its usefulness. Fig. 1 shows the feeder in use for syrup feeding, the bees having access to the float chamber

FIG. 1.

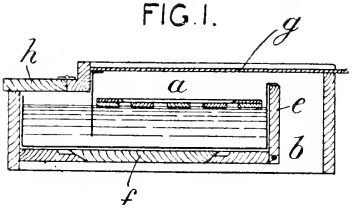
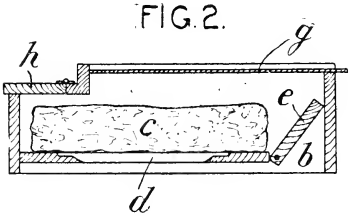


FIG. 2.



a through the rear passage *b*. Fig. 2 shows it in use for candy feeding, the removable tin liner being taken out, and the bees having free access to candy *c* in the feeder through a bottom opening *d*. At this time the rear wall *e*, which is hinged, is turned rearwardly to prevent access of bees to the top of the candy through the passage *b*. When syrup feeding the bottom opening *d* is closed by a freely fitting removable panel *f*. The conversion from candy to syrup feeding and vice-versa can be effected quite easily without removing the feeder from the hive, and when in place it provides at all times a clear passage for bees over the frames as the bottom of the feeder is raised. In either case a sliding glass cover *f* enables bees in the feeder to be seen, and the supply of food to be ascertained at a glance. By raising a hinged lide *g* at one end of the feeder, syrup can be supplied to the feeder from time to time as required without disturbance of the bees, which are prevented by a partition wall from obtaining access to the charging compartment. We understand the feeder is obtainable in various sizes from the principal London stores, or directly from the inventor, Mr. E. O. Dennis, of 11, Clarence Road, Bowes Park, N.22.

Week-End Bee-Keeping.

(By S. H. SMITH, Cambridge.)

Chapter II.

(*Continued from page* 120.)

Thursday was the first morning I heard that "wandering voice," "telling his name to all the hills," and heralding the approach of those halcyon days which make this England of ours the most desirable of all summer resorts. The subconscious mind must have been waiting and watching, as I awoke with every sense fully alert. Through the open window came warm wafts of the wallflowers' exquisite perfume. High up on the wall the first rays of the rising sun were gilding the paper with primrose and gold. And then the cuckoo called.

The first impulse was to jump up and dress, but calmer reflections showed that the D.B. was not due at the apiary until Saturday. A happy feeling as of some virtuous duty, duly and creditably performed, stole over me. It seemed a pious idea to bless the cuckoo, snuggle down under the bedclothes, and to pass again into the land of dreams.

Saturday dawned bright and early, and though I made all haste possible, I arrived at the apiary only a few minutes ahead of the D.B.

"A good start, D.B. You have brought overalls and a bee veil. Usually I have to lend mine to a novice. Let us take them and your basket of grub with us so as to save any unnecessary running backwards and forwards.

"Why I wanted you to come early was that you should see some of the sights the average novice misses, even though his bee stocks are in his garden, close to his house and bed.

"Here's the 'water hole.' Look at the thirsty little insects lapping up water. It is now only 6 a.m., but they have been visiting this watering place since sunrise. A flag of truce waves over this spot. All kinds of insects drink here side by side without one single display of temper. There's a queen wasp now. Note the mutual courtesy observed. It is true that when the stout, heavy wasp antennæ strike against the slender, thread-like bee antennæ that the bee backs away, but the wasp does not go into action. Very often a wasp will retire before a bustling bee that comes at it sideways.

"Why don't I kill the queen wasp? Not me. Wasps are worth their weight in gold at this season. Individually they kill their weight in noxious insects many times over every day in spring and summer to feed their brood. It is easy to locate their nests, and later on when they take to plundering fruit

and beehives it is just as easy to destroy them. Of course if you don't do this you will be plagued with them and lose many bee stocks and much honey. It is up to you to know your locality. I have found that many farmers will readily grant permission to me to go over their lands to discover wasp nests and mark them down for destruction before harvesting. Undestroyed wasp nests often cause bad accidents to men and horses at harvest time.

"I have timed the first bee to arrive at the water tank at 4.15 a.m., and the last to arrive to come at 9.15 p.m. That was in the good season of 1915, when I slept and lived in a bungalow among the bees. I used to turn the water off at night, and although there was a reservoir which caught the overflow and which was always full, yet those blessed bees would hum and buzz about the tap so loudly that this thirsty signal was as good as an alarm clock and never failed to wake me up. In self defence I had to get up and turn on the water. At once there was peace, and only a gentle murmur of approaching and retiring wings.

"Now let us walk in front of the hives. If we don't stop too long not a bee will protest. No veil is necessary at this season of pollen gathering, as the bees are on their best behaviour.

"Look at the various coloured loads the worker bees are bringing in on their hind legs. It is interesting to trace the various pollens to the flowers from which they were gathered. You may pick up a small handful of the little balls from the ground outside the hives. In the busy turmoil on the combs many little loads get displaced and fall on to the floorboard. The bees throw them out.

"Foolish? Well, I don't know about that. Matter in the wrong place is treated by the bees as noxious material. Let even the queen bee get on the floorboard too early in the season, and the bees will likely enough throw her out. Her place is on the combs at that period. The same thing happens to young bees unable as yet to fly, whose place is also on the combs. Let them get on the floorboard, and out they go. Any bee not acting normally gets treated the same way.

"Savage? Not at all. We humans may yet come to act the same way. Once we English were called 'those fierce islanders,' but to-day we are running away from our problems. Other nations are facing them more sternly. Already in nine states in North America they are sterilising men and women who are confirmed criminals, drunkards, degenerates, or of other undesirable types. And the bullet of the American policemen gets rid of many problems and pests that cost us millions of pounds because of our lack of resolution to face and annihilate them.

"All right, D.B., we will change the subject—and there goes the alarm clock. That means breakfast time. Here's a fine old greenwood tree surrounded by a bit of soft green turf. Yes, an alarm clock is as useful in the apiary as in the house. One gets absorbed in bee work or observations, or even bee talk, and one needs a reminder that time flies." *(To be continued.)*

Gloucestershire Bee-Keepers' Association.

ANNUAL MEETING.

The annual meeting of the Gloucestershire Bee-Keepers' Association was held at Bothet way's Restaurant, Eastgate Street, Gloucester, on Saturday afternoon, February 18, when Col. E. B. Jeune presided over a large attendance of members.

The Hon. Secretary (Rev. E. J. Bartleet), in presenting his report, congratulated the members of the Association upon having a most efficient Committee, which was always striving to help members, and to raise the standard of bee-keeping in the county. The number of members had kept up well, though from one cause or another many had been obliged to resign. Here he must say, and it gave him pain to say it, that there was a strange lack of courtesy in the way some people had treated the Association. There was a rule which said: "All subscriptions shall be payable in advance, and become due on January 1 in each year. Members should notify the Hon. Secretary of their intention to resign before the commencement of the year, otherwise they will be liable for the amount of their subscription." Last year more than 100 members failed to comply with this rule. Two separate applications for payment of subscriptions were made by the Hon. Treasurer, and he himself wrote to many members, many of whom had not deigned even to reply. They had enjoyed the benefits of the Association, and had put it to considerable expense, beside giving the officials a great deal of extra unnecessary work. He had spoken strongly, for he felt strongly it was not fair, and was unworthy of bee-keepers, whose motto should surely be "Each for all." The season had been on the whole a good one, and some large takes of honey had been recorded; but the continued dry weather and hot sun arrested many sources of supply. There had not been a great demand for bees, but they had been able to do a certain amount of re-stocking. By the kindness of members several most enjoyable garden meetings were held at their houses. Without doubt these meetings were most useful, and also promoted a spirit of comradeship, which was so delightful a feature of the craft. There was again a good entry for the B.B.K.A. preliminary examination. Seven members entered, and, what was better, seven members passed, and to them they offered their hearty congratulations. He hoped they would not be content with a preliminary, but would take their intermediate and final at the earliest possible moment. He also hoped more would enter for the examination. This year the annual Convention of Bee-Keepers would be held at Bristol. The Secretary expressed the gratitude of the Association to the County Agricultural Sub-Committee for their grants towards educational work and prize fund for the honey show, and to the judges (Miss Baddeley, and Messrs. Leedham and Burtt), and his personal thanks for all the help and kindness he had received during his third year of office.

The report, and the financial statement

(presented by the Hon. Treasurer, Mr. E. J. Burtt), were unanimously adopted.

The election of officers was then proceeded with. Col. E. S. Sinnott succeeded Col. Jeune as President; the names of Col. Jeune, the Dean of Gloucester (Dr. Gee), and Miss Newall were added to the list of Vice-Presidents; the Hon. Secretary was re-elected with acclamation expressive of the members' appreciation of his past excellent services; the Rev. F. H. Fowler was appointed Hon. Treasurer, an office he had previously held; Mr. E. J. Burtt was re-elected Hon. Librarian; and the Hon. Secretary was again also selected as the delegate of the Association to the British Bee-Keepers' Association. The Council and Executive Committee were, with few exceptions, re-elected.

The Secretary, prior to the adjournment for tea, supplemented his report with some interesting and varied remarks. The speaker also touched upon the question of the labelling of honey. He had heard it said, he remarked, that a very large amount of foreign honey was imported into this country, and that it was sometimes sold as English honey. He thought they ought to do something to prevent a continuance of this practice, either by the use of a recognised mark labelling foreign honey as such, or by some other means.

Following an interval for tea, Col. Jeune vacated the chair in favour of Col. Sinnott, who distributed to the successful candidates the preliminary examination certificates of the B.B.K.A., and also the medals and prizes won at the honey show in November.

The next item on the agenda was a paper to be read by Mr. G. S. Desmond. He, however, is at present abroad, and in his absence the paper was read by the President. In the course of the paper, Mr. Desmond urged that it should be the business of a county Association to encourage proper bee-keeping—not the keeping of any bee but the best bee, not just the keeping of bees but the best methods of bee-keeping, the production of the best honey in the largest quantities, and above this and as a way to this the maintenance of bees in perfect health, and the saving of apiaries from the danger of infection. By all these ways the argument was bound to return to the breeding of bees, and his proposal was to provide something in bee-keeping parallel to the egg-laying contests that decided the respective values of utility strains in poultry. They wanted to find a good and careful bee-keeper who would run one apiary exclusively for the testing of different strains of bees submitted to him by their respective fanciers with a view to finding which was the best. Mr. Desmond gave the lines which he suggested should be carefully and intelligently followed, and said if the test apiary was well used by the various breeders the certificate of pre-eminence awarded to the best stock would be very valuable to the owner of the strain from which it came, and ought to result in a quick improvement throughout the country in the quality of bees kept, and, therefore, in the average and total yield of their splendid Gloucestershire honey.

The reading of the paper gave rise to an interesting discussion, some of the members agreeing with Mr. Desmond's suggestion, while others thought the test should be a national and not a local undertaking.

It was decided, after Mr. Burtt had made an explanatory statement, with an estimate of the cost to be incurred, that efforts should be made to make arrangements with the Three Shires Agricultural Society for the holding of a bee-keeping exhibition in conjunction with their show to be held in Gloucester.

Votes of thanks to the Secretary for his invaluable services, and to Col. Jeune and Col. Sinnott for their services in the chair, concluded the proceedings.

(*Communicated.*)

Notts. Bee-Keepers' Association.

ANNUAL MEETING.

The task of the Bee Re-Stocking Committee in assisting apiarists to make good the losses brought about through "Isle of Wight" disease has been successfully accomplished, and it is considered that there is no longer any necessity for the continuance of the scheme. Mention of the matter was made at the annual meeting of the Notts. Bee-keepers' Association, which was held in the Albert Hall Institute, Nottingham, Mr. C. Taborn, horticultural organiser of the Notts. County Council, presiding over a large attendance.

In presenting the committee's 37th annual report, Mr. G. Hayes, the hon. secretary, said the membership now totalled 222. Last year stood out prominently as a most abnormal season, the yield of honey in some localities being exceptionally good, whilst in others it was only moderate, though the quality in all cases was exceptionally pleasing. Nine experts had been employed to give advice and assistance to owners, no fewer than 150 visits having been made. The following candidates had passed the junior craftsman's examination:—Messrs. C. J. Bond (Elston), G. R. Bostock (Aslockton), and Miss W. Freeman (Edwinstowe).

The financial statement showed a credit balance of £26 7s. 7d., and it was decided to grant £12 to the Bee Re-Stocking Committee to clear off its deficit, it being pointed out by Mr. A. Riley that the scheme of the latter was never intended as a commercial enterprise, but was formed with the object of meeting the requirements of bee-keepers.

Regarding a proposal to establish a central instructional apiary depôt for bee-keepers, the Chairman said it was hoped to incorporate a scheme which could be submitted in concrete form at the next annual meeting.

The Duchess of Portland was re-elected president, a tribute being paid to the work of Mr. Hayes, who consented to serve as hon. secretary and treasurer for another year. Messrs. Hayes and A. Riley were chosen as representatives to the B.B.K.A., and the district secretaries were thanked for their services and were re-elected *en bloc*.

The following were elected to the Executive Committee:—Mr. E. Hollingsworth, Heanor (chairman); Mr. A. E. Goodlad, Mansfield (vice-chairman); and Messrs.

M. H. Fox, Kirkley; G. Smithurst, Watnall; F. G. Vessey, Balderton; T. N. Harrison, Nottm.; G. E. Skelhorne, Nottm.; G. White, Sandiacre; W. Adams, Mansfield; W. Trinder, Edwinstow; L. W. Walton, Nottm.; W. E. Cowlishaw, Mansfield; G. R. Bostock, Aslockton; and W. Sharpe, Kirkley.

It was decided to hold several conferences in other parts of the county during the summer and autumn, so as to reach the more outlying districts.

The meeting then adjourned, and members and friends partook of tea.

A conference in the evening was opened by an address by Mr. Hayes on "The Treasures in a Pound of Honey, and How They May Be Found." Dealing with the synthesis of honey, the speaker emphasised the important part played by the flower, sun, and the bee in the production of honey, and referred to the food and minerals which formed the medicinal qualities. Later he made a few chemical experiments, showing the analysis of honey.—(*Communicated.*)

The Dumbartonshire Bee-Keepers' Association.

A number of bee-keepers of Dumbartonshire met, and an Association was formed as above. As it is desired to make the same a success, the committee would be glad if anyone interested who wish to become members would forward their names to the Secretary, Mr. Boswell Russell, 14, The Quadrant, Helensburgh.

The following office-bearers were elected:

President.—Mr. Jas. Steel, Marionville, Dumbarton.

Vice-President.—Mr. Robert Maclaren, Westcroft, Dumbarton.

Secretary.—Mr. Boswell Russell, 14, The Quadrant, Helensburgh.

Committee.—Messrs. Dittmyre, Herd, Salmond and Flowers.

Questions, &c., for Bee-Keepers for Self-Examination.

639. State as many reasons as you can for opening and examining a hive of bees.

640. Give details to show exactly how candy for feeding should be made.

641. Compare honey with invert sugar, as food for human beings.

642. Describe the Dutch skep, the interior and the exterior.

643. How may the length of the tongue of a live worker bee be measured?

644. What effect has prolonged mildness of weather in winter upon the consumption of winter stores? Explain why.

J. L. B.

Several articles and letters are in type, but are unavoidably held over for want of room. We hope to give another enlarged number in the near future.—EDS.

Kent B.K.A. and Mr. Bryden.

[10637] Owing to a change of newsagent I only got the "B.B.J." of February 23 to-day, and was surprised to hear of the petty treatment of Mr. Geo. Bryden, one of the ablest bee-keepers in Kent.

I was surprised, first at his letter in support of my criticisms, and secondly that I got no official reply from the K.B.A., of which I ceased to be a member, and so escaped the fate of being asked to resign.

My criticism was constructive, and meant to help the K.B.A.

I am as keen as ever on bees, as many of your readers will know from the little "H. N. W." invention brought out last year, and I still help beginners in this district, where the K.B.A. is almost unknown.

I was pleased to read in the same number of the JOURNAL of the success of the Bishop's Stortford B.K.A., of which I once had the honour of being honorary secretary. This Association is, I think, an example to the point of my contention that the smaller District Associations are more effective than the larger County Associations. — REV. HERBERT NEWMAN, Kemardington Rectory, Ashford, Kent.

Legislation v. Education.

[10638] Your issue of December 1 reached me to-day, and I am pleased to see your footnote to Mr. R. Whyte's letter (page 564), as it should convince that gentleman that there are others beside myself in this country who appreciate the value of our bee-keeping legislation, and that is the main point, whatever Mr. Whyte may say to the contrary. I am looking forward with much interest to Mr. Whyte's contribution in the *Bee World* (which has not yet reached me), in which he says he has "dealt fully with the present *appalling* disease situation in New Zealand." I hope he has not made too many mistakes, as it is not very satisfactory to have to go over the same old ground again. I dare say I shall be able to reply satisfactorily for most people, but I am inclined to think that anything I may put forward will not convince Mr. Whyte as to the benefits of legislation. It is not a nice expression to make use of, to say: "We have, time and again, had this New Zealand Bill and what it accomplished *thrown at us*" (italics mine), when the object has been to assist fellow-bee-keepers. It is one of those expressions that had been better left unsaid. — J. HOPKINS, Epsom, Auckland, N.Z.

Ventilated Super Clearer.

[10639] I was rather taken with the idea of the ventilated super clearer, but in practice I found that the bees choked the escape springs. I supposed that the ventilated board induced crowding. Do you think that is so? Have any of your readers had a similar experience?—GLYNN GRYLLS.

Bee Shows to Come.

May 24-27 at Guildford.—Surrey B.K.A. Show. Two Challenge Trophies, Apis Club Silver Medal, B.B.K.A. Silver and Bronze Medals and Certificate, Surrey B.K.A. Silver and Bronze Medals, Open Classes Honey, Wax, Appliances, etc., Demonstrations, Lectures, etc.—Hon. Secretary, W. E. Hamlin, 43, Norbury Court Road, Norbury, S.W.16.

Royal Show, Cambridge, July 4 to 8.—Over £40 in prizes. All classes open.—Schedules and all information from Mr. E. C. R. Holloway, Burwell, near Cambridge. **Entries close May 20.**

July 26-27, at Cardiff, Sophia Gardens.—Glamorgan Bee-keepers' Association, in connection with Cardiff and County Horticultural Society's Show. Open Classes. Special prizes: Taylor's W.B.C. Hive and Apis Club Bronze Medal.—Schedules from Secretary, Chas. F. Davies, 5, Borstal Avenue, Cardiff.

Special Prepaid Advertisements.

One Penny per Word.

***Trade** advertisements of Bees, Honey, Queens, and Bee goods are not permissible at above rate, but will be inserted at 1½d. per word as "**Business**" Announcements, immediately under the Private Advertisements. Advertisements of Hive-manufacturers can only be inserted at a minimum charge of 6s. per ½in., or 12s. per inch.*

*PRIVATE ADVERTISEMENTS are only intended for readers having **Surplus Stock** to dispose of. **Driven Bees, Nuclei, and Queens that are reared or imported for sale,** are Trade Advertisements, and can only be accepted under trade terms. A charge of 6d. extra per insertion will be made if a box number is used.*

Advertisements must reach us NOT LATER than FIRST POST on MONDAY MORNING for insertion in the "Journal" the same week.

Orders for three or more consecutive insertions in "The Bee Journal" entitle advertisers to one insertion in "The Bee-Keepers' Record" free of charge.

PRIVATE ADVERTISEMENTS.

FOR SALE, six strong, healthy Stocks Bees and Hives, nearly new, supers, all complete, £15; 10 Straw Skeps and Bees, heavy, guaranteed healthy, £10; one 4-frame Extractor, large Honey Ripener, one Uncapping Tray, what offers? 2 cwt. of Light Clover Honey, £10; all f.o.r.; must sell; owner going abroad; cash or deposit.—Apply, New Inn, Stratton, Evercreech. c.125

WANTED, "Cottage" or similar Honey Extractor in good condition. State particulars and price.—H. C. SELBY, North Brink, Wisbech. c.126

VERY strong Stock of Bees in standard hives, also 10 good empty Hives, for Sale; large quantity Drawn-out Combs, Honey Extractors, etc., etc.—Apply, E. SHORT, "Greenwood," Hadley Wood. c.127

STRONG, healthy Italian Hybrid Bees, May and June Swarms, 30s., carriage paid; box 5s., returnable.—H. ROBINS, 260, Priory Road, St. Denys, Southampton. r.c.128

SIX STOCKS BEES, healthy, W.B.C. Hives, Appliances; also Binocular Microscope; best offers; going abroad.—44, Frant Road, Thornton Heath, Surrey. c.129

40 LIGHT-COLOURED SECTIONS, 24s. per dozen, delivered.—SIMCOX, 17, Victoria Road, Fallings Park, Wolverhampton. c.130

FOR SALE, W.B.C. Hive with strong Stock Native Bees and one deep super, £6 10s.; also empty W.B.C. Hive complete with two shallow supers, partly fitted with drawn-out comb, free from disease, £2 10s.—ADAMS, Carno, Montgomeryshire. c.130

FOR SALE, three W.B.C. Hives with Stocks of Bees and Supers. What offers?—"Brinkwood," Latimer Road, New Barnet. c.132

FOR SALE, strong Stocks pure Italians, £4, April delivery; travelling box 10s. extra, returnable.—ROSE, Ten Mile Bank, near Downham Market, Norfolk. c.133

EXPERT, thoroughly practical, 40 years' experience all branches, honey raising a speciality, including heather, make all woodwork, appliances, open to engagement; honey raising apiary preferred; reasonable pay only expected.—Box 57, BRITISH BEE JOURNAL, 23, Bedford Street, Strand, W.C.2. c.134

FIVE STOCKS for Sale, complete with hives (new), Masheath and W.B.C. Allbons strain, all 1921 Queens (two Penna's), £5 per stock, or offer; also Extractor, several spare Hives and Accessories; purchaser to remove.—Apply, SECRETARY, Parks Department, Birmingham. c.135

FOR SALE, 7 cwt. pure Welsh Honey; best offer; sample 6d.—JAMES, Adpar, Newcastle Emlyn. r.c.137

SURPLUS.—Stock of Bees on 10 frames and Hive; healthy.—CARTER, "Goldsands," Southminster. r.c.138

SURPLUS STOCKS.—Italian Hybrids, 1921 Queens, 8/10 standard frames, April delivery, guaranteed no disease, £4 10s. each, free on rail.—Box 58, B.B.J. Office, 23, Bedford Street, Strand, W.C.2. r.c.142

FOR SALE, Observatory Hive, by Dixon, made of mahogany, 1st prize Royal Show, Liverpool, in perfect order, complete with three brood frames and supers of shallow comb and sections.—For particulars and price to C. L. M. EALES, "Dilkusha," Tiverton, Devon. c.139

SEVERAL surplus Stocks, Italian and Hybrid, very strong, satisfaction guaranteed, April or May delivery, 70s.; box 10s. extra, returnable.—COURTNEY, Murray Road, Northwood, Middlesex. c.164

FIVE strong 6-frame Stocks, Italian Hybrids, 50s. each. Just right for fruit blossom.—A. CHUDLEY, 335, Uxbridge Road, West Ealing. c.165

HAVE A FEW more strong Stocks Hybrids on six standard frames, wired combs, 1921 Queens, good working strain, for April delivery, 50s., carriage paid.—WM. CHANNELL, Grove Apiary, Histon, Cambs. c.166

SURPLUS STOCKS of Italian Hybrids for disposal; price according to number of combs desired; no disease; all 1921 Queens. Also 200 Raspberry Canes for Sale, well-rooted plants, 10s per 100.—WM. JACKSON, Post Office, Bleasby, Notts. c.167

THREE strong 10-frame Stocks Italian Hybrids, satisfaction guaranteed, April delivery, £3 5s.; box 10s. extra, returnable.—G. PELLING, Westergate Wood, Chichester, Sussex. c.168

BEES.—14 Stocks, free from disease, £2 per stock. Pure Honey, 1s. per lb., in 12-lb. tins. Have about 2 cwt.—J. J. WRIGHT, "Glendower," Commercial Road, Dereham c.170

SWARMS wanted, April-May; weight and quality guaranteed.—Offers to "BEE-MASTER," 1, Park Crescent, Sheffield. c.86

For best bees, queens and appliances come to PEARSON & GALE, Marlborough.

THREE strong 10-frame Stocks Italian and Italian Hybrids, healthy, April-May, 75s., carriage paid; box 10s. extra, returnable.—BIRD, 40, Frederick Road, Cheam. a.b.

OWING to failing health I must sell my Italian Bees and W.B.C. Hives. Bees strong and healthy, 1921 Queens, hives nearly new, just repainted. What offer? — DOBSON, Hunton Bridge, Herts. r.c.89

CHANNEL ISLES.—Model Apiary for Sale; "Isle of Wight" disease unknown; no rival apiarists; good local sale for honey at big price; good breeding station for export; capable of extensive enlargement; opening for poultry farming in conjunction; lovely climate; exceptional opportunity.—PENROSE, Havelet, Guernsey. r.c.91

20 STRONG STOCKS ITALIAN HYBRIDS, good working strain; free from disease; satisfaction guaranteed; April-May, 80s., carriage paid; Hive, 20s.; box 10s. extra, returnable.—REV. COOPER, 62, Park Hill, Carshalton. r.c.153

TWO strong Dutch Colonies, April delivery, £4 each, or nearest offer.—MISS CHEAPE, St. Andrews. r.c.95

OVERSTOCKED.—"Every colony wintered." 10-frame Stocks pure Italians, Penna or Buckfast 1921 Queens, delivery April, 75s., carriage paid. —WADHAM, 5, Gold Street, Cardiff. r.c.109

TWO 6-frame Stocks Italian Hybrids, 1921 Queens, April-May, 60s.—WALLACE, Hedenham Lodge, Bungay, Suffolk. r.c.46

IN CONSEQUENCE of the Herefordshire County Council giving up their Restocking Scheme, the Apiary is for disposal. Italian or Italian Hybrids, all good, healthy 10-frame Stocks, all 1921 Queens, either with or without hives, without hives sent in special travelling box carriage paid to nearest station, 70s.; box charged 10s. extra, which will be returnable and cash allowed when received. Also 200 drawn-out Shallow Combs, 14 top bars, perfectly healthy, 18s. 6d. per dozen, carriage paid. Orders booked in rotation. Cash with order. J. ARNFIELD, Arneroft, Brenton, Hereford. r.c.59

BUSINESS ADVERTISEMENTS.
(1½d. per word.)

THE WISE BEE-KEEPER looks for quality. The South Hampshire Apiaries breed only from the very best strains. Result: Quality and satisfaction. Beginners' Outfits from £5.—All communications, H. E. NEWTON, New Milton, Hants.

STRONG NUCLEI, finest Italians, 3 frames, 30s., delivered May and June.—E. COOMBER, 64, Ronald Park, Westcliff-on-Sea. c.156

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OUR 1922 CATALOGUE

The Largest Bee Appliance Manufacturers in Europe.

White Candy—4 lbs., 5/- post free; 10 lbs., 11/- post free. Glass top boxes (2 lb.), 4 lbs. 5/- post free.

E. H. TAYLOR, Ltd., BEEHIVE WORKS, WELWYN, HERTS.

EGGS, per dozen, box returnable.—Agnew's Champion Black Orpington, 18s.; Barron's White Wyandotte, 15s.; Carter-Hunter White Leghorn, 10s.; Taylor White Runner Duck, 10s.; Utility Fawn Runner Duck, 7s.; packed, carriage paid; excellent layers.—GRISELDA CHEAPE, St. Andrews, Fife. r.c.94

3 CWT. finest Buckinghamshire Honey from the Chiltern Hills.—28 lbs., £2; 56 lbs., £4; 1 cwt., £7 10s., or £21 the lot; carriage forward; tins free. Also three exceptionally fine, healthy Stocks, Italian Hybrids, 10 combs packed with stores, brood and bees; no disease; delivery early April; £4 10s. each.—STEVENSON, Thames View, Flackwell Heath, High Wycombe, Bucks. r.c.110

17 STRONG Italian Hybrid Stocks, £3 10s. each, April delivery; guaranteed healthy; travelling boxes 10s. extra, returnable.—H. YOUNG, 42, James Street, Cambridge. r.c.52

20 ITALIAN STRONG STOCKS for Sale, guaranteed free of disease, Penna and Bozalla Queens, 80s., carriage paid, in returnable travelling box, 10s. Honey, finest quality, in 1-lb screw top bottles, 1s. 9d. each, packed free on rail.—WALKER, Symonds Hyde, Hatfield, Herts. r.c.49

YOU CANNOT EXPECT EGGS unless you keep birds that have been bred for egg production. Chicks, White Leghorn (Lady Eglantine strain), Leghorn-Wyandotte (Snowden's), Light Sussex, 16s. dozen; sittings, 8s.—COBB, 33, Bevan Road, Plumstead. r.c.83

"CLEOPATRA" QUEENS AND BEES.
We have two stocks that gave us 17 nuclei and over 200 lbs. honey last season. In spite of these fearful depredations, they have successfully wintered, and are now literally "bung full" of bees on 12 frames.

We are heading our Stocks reserved for honey production with young Queens bred from these two stocks, but will have a few Colonies for Sale.

CLEOPATRA Stocks and Nuclei from 25s. List post free.

THE THAMES VALLEY BEES (REGD.), TEDDINGTON. c.138

PENNA QUEENS.—Please note precise address: ENRICO PENNA, Casella Postale 178, Bologna, Italy. r.c.141

BOWEN'S WIRING BOARD makes wiring a delight. Board, 7s. 3d.; Outfit, 10s. 6d.—BOWEN. c.146

OUR FEATURE!—Package Bees, 2-lb. lots, with choice Queen, 37s. 6d., May delivery. Book now.—BOWEN, Queen Specialist, Cheltenham c.147

FOR SALE, five 4-framed Nuclei at 40s. each, delivered in April.—R. DOUBLE, Orchard House, Walton-on-Naze, Essex. c.149

GRAFTON ITALIANS. Early Nuclei, 3 frames brood, 1922 Queen, crowded bees, £2; 4 frames ditto, £2 10s.; all carriage paid. Nothing better obtainable. Inquiries.—MASOM & HEDLEY, Grafton Regis, Stony Stratford. c.150

Orders booked now for April Stocks. Catalogues now ready. PEARSON & GALE, Marlborough.

THE "AUSTRAL" HIVE TOOL, best pattern ever made; especially designed for Langstroth hives; equally good for others; price 3s., post 4d.—BLACKBOURN, Wootton, Kent. c.145

STRONG, healthy Swarms, April and May delivery, in new skeps with wood ring, 36s. 6d.; also strong, healthy Stocks in skeps, full of brood, £2 15s.; carriage paid. All kinds of Straw Skeps for Sale.—H. SEAMARK, Skep Works, Willingham, Cambs. c.146

THE BEE WORLD for March contains the best illustrated article ever published on "Hubam" by Mr. Henry Field, and a host of other contributions by eminent practical writers at home and abroad, including an original article on "British Queen Rearing" by Mr. William Herrod-Hempsall, F.E.S. No "bee cure" acrobats have a chance for ventilating their camouflaged commercialism or wonderful ignorance in it. Order your copy from your newsagent, or direct from the B.B.J. Office. One article in any number is worth the whole year's subscription. c.144

IMPORTED 1922 ITALIAN QUEENS, 10s. Nuclei, 3-frame, 35s.; 4-frame, 45s., headed imported Queens; May delivery; cash with order; notation.—HENSLEY, Luton Apiary, Chatham. c.151

MAY-JUNE NUCLEI, headed by Penna 1922 tested Queens, £2 2s. (3-frame), £2 10s. (4-frame); travelling boxes 10s. extra, returnable. Cash with order.—ALLEN, Mill Apiary, Cransford, Framlingham c.152

THE "THAMES" COMMERCIAL HIVE

for (1) sound workmanship ,(2) easy manipulation, (3) non-swarming, (4) honey production on commercial scale, and (5) low price, is ideal for your 1922 swarms. Capacity brood chamber, 15 frames, **28/-** only.

Further details in Catalogue, post free.

WANTED, to advertise our "THAMES" HIVE in County B.K.A. Reports. Copy of last year's report would assist us to judge circulation.

THE THAMES VALLEY BEES (REG'D.), TEDDINGTON.

"The 'Thames' Hive will revolutionise modern bee-keeping." c.158

THE BEST INVESTMENT is an Ambrosian 6-comb Stock.

AMBROSIAN STANDARD SWARMS, 3 to 4 lbs., 45s., May 1 to 15.

SURPLUS HIVES from 7s. 6d. Stamp for list.—AMBROSIA APIARIES, S. Farnboro', Hants. c.159

STOCKS genuine Swiss Bees for Sale. Write for Descriptive Circular. — DAVIDSON, Forest Road, Burton-on-Trent. c.160

STRONG, healthy Dutch Bees in Skeps; reduced prices; immediate delivery. Write actual importer.—DAVIDSON, Forest Road, Burton-on-Trent. c.161

ITALIAN, Carniolan and Hybrid Stocks and Nuclei for Sale, strong and healthy, delivery April, May, low prices.—DAVIDSON, Forest Road, Burton-on-Trent. c.163

SWARMS BOOKED, May delivery, Italian, Carniolan, Dutch; low prices.—DAVIDSON, Forest Road, Burton-on-Trent. c.162

HONEY wanted, granulated; must be light; in tins; free sample and price carriage paid.—THOMAS, Burwell, Cambs. c.169

"CARRIAGE PAID."—Honey Jars, screw tops, 39s. 6d. gross.—ERNEST GRIFFITHS, Helsby, Cheshire. r.c.97

"WIGHT" AND "ACARINE" DISEASES.—Prevention and removal; invaluable advice; 5s. 6d. "An eye-opener."—ALF. RYALL, 8, Ospringe Road, N.W.5. r.c.87

ITALIAN AND HYBRID NUCLEI from Penna and other excellent selected strains, 1922 fertile Queens, 3 frames, May 37s. 6d., June 32s. 6d., carriage paid.—MOORE, 51, Monmouth Road, Dorchester. r.c.105

MIDDLESEX BEE-KEEPERS' ASSOCIATION. —A Course of six Lessons in Practical Bee-keeping will be given at the Model Apiary, S. Mimms. Inclusive fees: Members of the Middlesex Association, 7s. 6d.; non-members, 10s. 6d.—Syllabus and dates can be obtained from the HON. SEC., Middlesex Bee-keepers' Association, 23, Bedford Street, W.C.2. r.c.107

DUTCH-ITALIAN HYBRIDS, 4-frame Nuclei, £2 10s. These bees have proved most wonderful working and disease-resisting strain. No better bees can possibly be obtained, and owing to such a great demand on this strain last year I have only a limited number for disposal. Also Italian and Dutch, £2 5s., carriage paid. Cash with orders. Stamp reply. Apiaries at Ashford, Halliford, and Walton.—SEALE, Ashley Warren, Oatlands Chase, Walton-on-Thames, Surrey. r.c.116

FEW GOOD NUCLEI, headed by splendid Italian or Dutch Queen, 3 frames, 35s.; 4 frames, 40s.; May delivery.—SMALL, Moorlands, Harpenden. r.c.104

NINE ITALIAN STOCKS with 1921 imported Queens, £3 11s.; eight with 1922 Queens, £3 15s.; six Hybrid Italian Stocks, 68s. 6d.; several 5-frame Nuclei with 1922 imported Italian Queens, £2 each; all carriage paid; spring delivery, and 15½ in. top bar to standard frame to suit "Wormit" commercial hive, of which I have had some hundreds in use for 16 years. State if clipped or unclipped queens are required.—THOMAS, Burwell, Cambs. r.c.121

SEVERAL STOCKS OF ITALIAN BEES, headed by Queens, the best obtainable.—8 frames, 80s.; 6 frames, 60s.; 4 frames, 45s.; Italian Hybrids same price; guaranteed healthy; box 10s. extra, returnable.—MYTTON, Lyncroft Apiary, Stafford Road, Lichfield. r.c.123

25/-.—WELL-KNOWN Breeder offers limited number 3-frame Nuclei of excellent working strain Italians, with young fertile Queen, delivered end of May-June.—Box 56, B.B.J. Office, 23, Bedford Street, Strand, W.C.2. r.c.124

OURS ARE JUST GOOD BEES.—Not the miracle working super-bees one hears about, but just the highest grade of pure Italians. Certainly as good a strain of hard-working little Bees as we have met (or had authenticated evidence of). Perhaps Stocks or Nuclei of these are what you want? Our original guarantee against Acarine Disease still holds good.—WELSH BEE GARDENS, Brecon (Proprietor, Lt.-Colonel Weaver Price). We like helping beginners. r.c.71

QUEENS of world-famed American-Italian strains ensure immunity to Acarine disease under rational management. Booklet on "Rational Management and Prevention of Disease," 2d.—STURGES, Shenstone, Hartford, Cheshire. r.c.72

IMPORTED CARNIOLAN QUEENS.—Reduced prices. List, stamped, addressed envelope.—WOODLEY, Thorne, near Doncaster. r.c.58

BOWEN'S PERSONAL SERVICE

With every Stock, every Queen, every B:Goods Parcel despatched, is the honest endeavour to PLEASE—to give lasting SATISFACTION

WRITE FOR BOOKLET.

Lt. BOWEN—— B SPECIALIST—— —CHELTENHAM.

NOW IS THE DANGEROUS TIME. 4 lbs. Candy, 4s. 6d.; 10 lbs., 9s. 9d.; plain or floured.—COBB, 33, Bevan Road, Plumstead. r.c.81

DUTCH BEES, in skeps, £3 10s.; Swarms, 25s. to 35s.; Stocks and Nuclei, standard or commercial.—COBB, 33, Bevan Road, Plumstead. r.c.82

FINEST ITALIAN NUCLEI, headed by Cannell's imported 1922 American Beauty Queens, 3-frame, 45s.; 4-frame, 55s.; carriage paid; travelling boxes returnable; satisfaction guaranteed.—HOGAN, Boxford, Suffolk. r.c.25

ALBERT HOPKINS, Breeder, Importer best Italian Stocks, Nuclei, Queens. Satisfaction guaranteed. Prices moderate, application. 25 years' practical apicultural experience.—Woodland Valley Apiary, Lyminge, Kent. r.c.26

BENHALL BEES.

A LIMITED number of really good 3-frame Nuclei, headed by purely-mated 1922 Italian Queens, during May £2 10s. Cash with order.—RIVIS & GRAY, Benhall, Saxmundham. c.157

COLONIAL HONEY FOR BEE-FEEDING.—Australian new white, 60-lb. tin 39s., two tins 77s.; finest West Indian, 56-lb. tin 41s. 6d., two tins 75s.; carriage paid Great Britain.—LONDON TRADING AGENCY, 32, St. Mary Axe, London, E.C.3. r.17

EXCELLENT opportunity for Pupils to learn honey production on a range of apiaries; premium required.—THOMAS, Burwell, Cambs. r.c.39

FERTILE ITALIAN QUEENS, the best, April, 12s.; May, 10s. 6d.; 4, 38s.; 6, 56s.; 12, 96s. Special quotations 25 to 100 queens. Safe arrival guaranteed.—ATKINSON, Fakenham. r.c.40

ITALIANS.—Nuclei, 1922 Queens, 3-frame, May 40s., June 32s.; Colonies, spring delivery, 6, 8, 10 frames, 50s., 62s., 73s.; carriage paid; returnable crates.—ATKINSON, Fakenham. r.c.41

BRITISH bred Italian Nuclei and Queens. Prices on application. — CHARMAN BROTHERS, West Hill Apiary, Brookwood. r.b.4

WICKHAM BISHOPS ASSOCIATION is now booking orders for early delivery. Prices: 5-frame Nuclei, 50s.; Stocks on 10 frames, 75s.; Swarms from 25s.—Address, BEE-KEEPERS' ASSOCIATION, Wickham Bishops, Essex. r.b.76

BUCKFAST QUEENS are the very best. 1922 Circular and Price List sent free on application.—REV. BR. ADAM, Buckfast, S. Devon. r.b.81

QUEENS by return from April till October.—PEARSON & GALE, Marlborough. w.14

HAVE YOU READ "THE BEE WORLD"? If not, why not? Every number in itself is a useful literary work for practice and reference. Specimen copy free.—Offices: THE APIS CLUB, Port Hill House, Benson, Oxon.

NEW HARDY YELLOW VARIETY.—No loafers hottest days. Gathered honey 1921 after all others had retired from business.—Particulars, S. SIMMINS, Queenland, Heathfield, Sussex. r.a.13

JACK TICKELL.—For Queens, Stocks and Nuclei. List free. — Westbourne Apiary, Cheltenham. r.a.54

DUTCH BEES.—Send for my artistically Illustrated Catalogue outlining my method of managing bees profitably. Read my notes on Queens and Queen Rearing. Will interest the expert and amateur. Free for the asking.—WHYTE, Bee Farm, Cumbernauld Station, Dumbartonshire. r.b.32

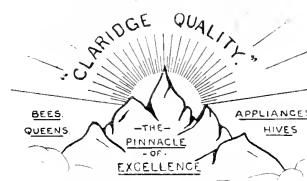
STRICTLY BUSINESS.—One dozen Flavine—S Powders, 1s.; a Japanned Sprayer, post free, 6s.; a Floorboard Feeder, to fit under any hive, 10s., post paid.—S. H. SMITH, 30, Maid's Causeway, Cambridge. c.65

THE ACARINE 1921 ECLIPSE PAD.—It knocks out mites and moths. Your money back if not satisfactory. Price 5s., post paid.—S. H. SMITH, 30, Maid's Causeway, Cambridge. c.66

FLAVINE CANDY, 4 lbs., 5s.; 6 lbs., 7s.; 10 lbs., 11s.; all post paid.—S. H. SMITH, 30, Maid's Causeway, Cambridge. c.67

BOOK NOW!—Choicest home-bred Carniolan Queens for 1922.—PEARSON & GALE, Marlborough. b.24

ADMINSON'S SEMI-COMBS.—Nuclei on these combs from mid-May at cheapest rates.—PEARSON & GALE, Marlborough. r.b.66



F. M. CLARIDGE, Copford Apiary, Colchester

SKIPWITH CANNELL is pleased to announce that **American Beauty Nuclei** can be obtained for Spring delivery from

Mr. HOGAN, Boxford, Suffolk (See Business Advertisements.) Please order direct from him.

My 1922 American Beauty Breeding Queen has already brood in five combs (2,000 feet above sea level!). Her stock gave 117 lbs. of honey and 9 lbs. of bees in a year so poor that many stocks headed by queens of other strains failed even to secure their winter stores! Quality counts.

An American Beauty

May	June	July	Aug.—Oct.
12/-	10/-	9/-	—

Safe arrival, prompt service and satisfaction guaranteed, of course——also gentleness, activity, beauty, hardiness, and disease resistance; blood will tell! I never mail a queen I wouldn't *like* to keep.

SKIPWITH CANNELL, The American Breeder of **American Beauty** Queens, **Aux Sieyes, par Digne, B.A., France.**

The Wise Bee-keeper

Will look ahead and prepare Now for the coming season.
We have made big reductions in prices and our 1922 Catalogue ***is now ready,*** and if you have not received a copy send a post card now and it will be sent post free by return.

Our Famous Prize Bee Candy

Prices :—**1/-** per lb., post 9d. ; 4lb. **5/-** post free ;
7lb. **8/-** post free ; 10lb. **11/-** post free.
In 1-lb. cakes or 2-lb. Boxes with glass top, as desired.

Hubam Clover Seed.

We are importing a quantity of this famous honey-bearing plant, and can supply at **10/-** per lb. ; **6/-** per ½ lb. ; **4/-** per ¼ lb. ; post paid.
Orders supplied in rotation.

R. STEELE & BRODIE, ***Wormit Works,***
Telegrams :—"Bees, Wormit." **WORMIT, FIFE.** **Telephone :—28 Wormit.**

The Premier Quality. Facts Tell.

"The only hive I have left is the one I introduced your 'White Star' queen to last June. One neighbour has lost 10 stocks; another 3 out of 6. To-day *your* queen's stock is working hard." R. F.
Warrenpoint, March, 1922.

Another client ordering W.S. bees for current season says: "I have had very bad luck with the ordinary *commercial* bees, and now intend to try for the last time with the best." J. P. L.
Regent's Park, March, 1922.

"In the year 1920 I received one of your 'White Star' 3-frame nuclei, and although the season was very bad, as you well know, I did exceedingly well with your bees, and am desirous of a further supply. Please send as enclosed order for self and a friend."
Stairfoot, March, 1922. C. W.

Thousands of such warning and convincing letters are received, and tell only too plainly which way the weather vane points to those who wish to avoid wholesale losses.

List free : 20 p. annual 4d.

S. Simmins, Queenland, Heathfield, Sussex.

OVERTON'S Illustrated CATALOGUE for 1922

NOW READY. **Write for a Copy, post free**

OVERTON'S MEDICATED CANDY.

Glass top boxes (1 or 2 lb.)	4-lb. **5/**	7-lb. **8/3**	10-lb. **12/-**	Post free
Plain top boxes do.	4-lb. **4/8**	7-lb. **7/6**	10-lb. **10/-**	do.

C. T. OVERTON & SONS, CRAWLEY, Sussex.

BEE CANDY, **7-lbs. post free 7/6 10-lbs. 10/6**

Reduction for further quantities.
S. J. BALDWIN, BROMLEY, KENT.

The Bee-Keepers' Calendar.

MARCH, 1922

30 Thursday. "O for boyhood's painless play,
Sleep that wakes in laughing day,
Health that mocks the doctor's rules,
Knowledge never learned of schools,
Of the wild bee's morning chase."
J. G. Whittier, "The Barefoot Boy."

31 Friday. "Love in my bosom like a bee
Doth suck his sweet;
Now with his wings he plays with me,
Now with his feet."—*Thomas Lodge, "Rosalynd's Madrigal."*

APRIL, 1922.

1 Saturday. "You, luckless Bee, must now seek far
For honey on the windy lees;
No sheltered garden, near your hive,
To fill a bag with ease."—*W. H. Davies, "A Luckless Pair."*

2 Sunday. "The judgements of the Lord are true and righteous altogether . . . . . sweeter also than honey and the honeycomb."
Psalm xix. 9, 10.

3 Monday. "It's song to a man's soul, brother, fire to a man's brain
To hear the wild bees and see the merry spring again."
Masefield, "The West Wind."

4 Tuesday. "Oh loveliest there the spring days come,
With blossoms, and birds and the wild bees' hum."
W. C. Bryant, "Green River."

5 Wednesday. "First find a site well suited to the bees
Where ne'er a wind has access, for the winds
Prevent the carrying of the pollen home."
Virgil. Georgics, Book IV.

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Obituary Notice.

LT.-COLONEL H. F. JOLLY.

Many will share our regret that we have to announce the death of Lt.-Colonel H. F. Jolly, which took place at Glenavon, Clifton Down, on March 17, after a very short illness.

Lt.-Colonel Herbert Francis Jolly was the eldest son of Mr. Frank Jolly, the senior partner in the

firm of Jolly & Sons, of Bristol and Bath. He was born at Bath in the year 1862, was educated at Christ's College, Finchley, and spent some time in Germany to complete his education. After gaining business experience with one of the leading wholesale firms in London, he joined his father in the business in Bristol, where he was later joined by his brother. He was unmarried, and lived with his father at Clifton Down.

As a boy he was always keen on natural history and microscopic work, which was useful to him when he became a beekeeper later in life. He began beekeeping at Henbury, near Bristol, in 1895, and became a Vice-President of the Bristol, Somersetshire and South Gloucestershire Beekeepers' Association, and in 1902 he was elected a member of the Council. In 1906 the Association was reorganised as the Somerset Beekeepers' Association, and Colonel Jolly was elected Chairman of the Council, a position which he held until his death. He put his whole soul into the work, and did much to bring the Association to its present flourishing condition. He spared neither time nor money to advance its interests, and although a man of retiring disposition, naturally his enthusiasm brought him into prominence, and among members of the Association he was extremely popular. He did not keep many hives, but with those he had he carried out many experiments, and as a microscopist did research work in connection with finding the cause and cure of bee diseases.

He joined the Volunteer Force, the 2nd Gloucester Royal Engineers, in 1887 as 2nd Lieutenant, and received the Long-Service Medal after twenty years' service in 1907, when he retired with the rank of Lieutenant-Colonel. When war broke out in 1914 he was above active service age, but assisted as a voluntary motor driver in the ambulance section of the Red Cross movement.

Although the claims of his business absorbed much of his time, he was a keen sportsman, and his quiet enthusiasm in whatever he took in hand brought him into prominence in several directions. He had the gift of a charming affability, and by his sound business acumen, his advice on commercial problems was sought frequently even on matters outside his particular business.

By his death beekeepers lose a friend and benefactor and one to whom the Somerset B.K.A. owes a great deal for its present flourishing condition. The funeral took place at Canford Cemetery, and was attended by a large number of people beside the business staff, showing the great respect in which Colonel Jolly was held, and the Rev. W. S. Michell and Mr. L. Bigg-Wither attended as representatives of the Somerset Beekeepers' Association.

To the family we extend our sympathy in the severe loss which they have sustained, and we are sure that we are expressing the feelings of all beekeepers in the county.

Diseases of Adult Bees.

WESTMINSTER HALL LECTURE.

(*Continued from page* 130.)

Another stumbling block hindering progress in research had been the assumption that when *Nosema apis* was found, the whole cause of the trouble was explained. In due course it became obvious to all who examined bees, that this parasite was oftener absent where the disease was only too apparent, while contrariwise it was sometimes very much in evidence in the absence of the usual disease symptoms. Investigators were long misled in looking for something very small. However, out of many misdirected searches, inevitable in such cases, progress has been made and knowledge gained so that we are now much advanced on the way both to understand and to control diseases in the adult bee. There are one or two safe conclusions we may now draw. First, more than one specific disease exists from which bees suffer in this country. Besides such diseases bees are also affected by more temporary ailments with similar symptoms, but an experienced observer may tell the difference. Second, we may go even further and assume that there are diseases other than Nosema and Acarine disease; in this country we have at least three in adult bees and possibly more.

A few remarks were made on dysentery. This, though often associated with disease, is not one of the three mentioned, and is not a disease in the ordinary sense, but is brought about by adverse circumstances, or bad management. It is more a winter trouble caused by unsuitable food, damp and confinement. Bees kept at a high temperature may have dysentery without disease. Besides Nosema disease and Acarine disease, Dr. Rennie stated that we must recognise in this country the presence of Bee Paralysis. While neither *Nosema apis* nor *Tarsonemus woodi* could be found in bees suffering from this disease, there were several distinct features: bees crawling, bees dragged out of the hive, or attacked, bees running about more or less quickly,

bodies show polished or shiny appearance, those on the ground have trembling body and limbs. It occurs mostly in the early part of the year, and will pass off with favourable weather, and unless the loss has been severe the colony will build up. Dr. Rennie mentioned the very important work that has been done in Sweden in connection with bee diseases, very little notice of which has been taken in this country, and quoted extracts from publications on the subject, in which the theory was advanced, that disease may be caused by mould in the hive. Scientific investigations have been made into intoxication, due to mouldy combs and mouldy food caused by bad ventilation. Mould quickly grows in the hive, and though the bees may clear this from the surface of the comb, it penetrates deeper than that, and honey stored in the cells may become contaminated with mould. Bees were fed with honey containing mould, and after two hours showed signs of discomfort, but in these experiments there was more mould than would be taken normally in the hive. Damp is favourable to mould, and therefore late feeding with syrup should be avoided, as the moisture evaporating from it tends to saturate the hive, and food ferments, this causing mould. Mouldy comb should not be used, and mould should not be tolerated. Ventilation is a very important factor in its prevention. The one possibly weak point in this research was the limited number of experiments recorded.

(To be continued.)

Unedited Letters of Huber.

INTRODUCTION, BY EDOUARD BERTRAND.

(Translated, and published by the kind permission of Mr. C. P. Dadant, editor "American Bee Journal.")

Here is a résume of the discoveries of Huber, by the noted A. P. De Candolle :

The origin of beeswax was then a much-discussed point of the history of bees by naturalists : some of them had said, but without sufficient proof, that they had made it of honey ; Huber, who had successfully unravelled the origin of propolis, confirmed that opinion concerning beeswax through numerous tests, and showed especially, with the help of Burnens, how it oozed from the rings of the abdomen, in the shape of scales. He made extensive experiments to ascertain how the bees prepare it for their combs. He followed, step by step, all the constructions of those marvellous hives in which the bees seem to solve the most subtle problems of geometry ; he assigned the role which each class of bees plays in this work, and followed their labour from the rudiment of the first cells to the complete perfecting of the combs. He made known the ravages caused by the *Sphinx atropos* (death's head moth) in the hives which it enters ; he even tried to unravel the history of the senses of bees, and particularly to seek the seat of the sense of smell, the existence of which is demonstrated upon the entire natural history of insects, while their structure has not yet permitted to locate it with certainty. Lastly, he made interesting experiments on the breathing of bees ; he proved by several experiments that those insects need oxygen just as do other animals. But how can air be renewed and retain its purity in a hive closed everywhere, except at a small entrance, with a sort of putty ? This problem required all the sagacity of our observer, and he came to recognise that the bees, by a peculiar motion of their wings, set the air in motion so as to secure its renewal ; after having taken note of this, he even proved his statement by imitating this ventilation through artificial means.

These experiments on the breathing of bees required some analyses of the air of the beehives, and this requirement caused Huber to come in contact with Senebier, who was making analogous researches upon plants. Among the means that Huber had thought out to ascertain the quality of the air in the hives was that of germinating some seeds within the hive, basing himself upon the idea that seeds will not germinate in an atmosphere too much deprived of oxygen. This experiment, though imperfect for the purpose intended, brought to the two friends the idea of making researches on germination ; and the most curious part of this association of a blind man with a clear-sighted man was that it was usually Senebier who suggested the experiments, and Huber, the blind man, who executed them.

II.

This is what was known, up to that time, of the works of Huber. He died on September 22, 1831, and his life, after 1814, was unknown. It was not, however, admissible that he should have stopped making observations, after taking so much interest in the subject for 25 years. Moreover, the end of the preface of the second volume of his 1814 edition indicated exactly the opposite.

"I might," said he (New Observations, Vol. 2, page 6) "add several observations to those which I now give to the public ; but they do not present a sufficiently connected aggregate, and I prefer to wait till they may be accompanied with facts upon which they have a bearing."

A lucky concourse of circumstances permits me to-day to partly make good this shortage.

In 1890, during a visit of apiaries which I made in Savoy, in company with Messrs. De Layens and Cowan, I learned from M. E. Mermey, of Aix-les-Bains, a young beekeeper who had followed my course of lessons at Nyon, that the father of a neighbour beekeeper, M. Ch. De Loche, possessed among his family papers a number of unedited letters from Francis Huber, addressed to his grandfather, Count Mouxy De Loche. We hastened to visit the Castle of Loche to

solicit the permission of reading those letters. The Count was momentarily absent, but we were given the best welcome by his sons, who promised to transmit our request to their father. The latter had the kindness to visit us that same evening at Aix, and did me the great favour of entrusting those letters to me, with the permission to publish them.

His grandfather, Francis de Mouchy, Count De Loche, born at Gresy-Sur-Aix, in 1756, and deceased in 1837, was an observer and a savant of merit. After having served in the Army of the House of Savoy and reached the position of major-general, he had withdrawn to Turin, later to Loche, to devote himself more completely to his taste for natural history and archæological researches. He published a great number of works on natural history, archæology, history, agriculture, etc.

But my good fortune did not end there. When I published, in 1894, a new edition of the remarkable memorandum of A. P. De Candolle upon the author of the "New Observations," I sent a complimentary copy of it to Mr. George de Molin, engineer at Lusanne, grandson of Francis Huber. This kind old man hastened to inform me that he was just then busy sorting papers which had been forwarded to his mother by the heirs of his uncle, Pierre Huber, after the death of the latter, and that there were among them quite a number of letters from his grandfather, nearly all relative to bees. Although he believed that his uncle had taken from these letters and perhaps inserted in the "Annals of the Society of Physics" of Geneva anything which might interest scientists, he offered them to me in case I should desire to inspect them. Looking through the above-mentioned "Annals," we found no trace of these letters whatever.

In the file of letters which were kindly loaned to me by Mr. De Molin, I found a certain number of first drafts of letters addressed to Miss Eliza De Portes, at Bois d'Ely, near Crassier. Having obtained information from a friend of the family, I learned that the young lady correspondent of Huber had become Mrs. De Watteville, and that she was residing at Berne.

This venerable lady, now more than octogenarian, was kind enough to loan me the entire collection of those letters, found in a volume of manuscript, and sent with the parcel the following words, which I take the liberty of publishing :—

"My niece, who is returning to Bois d'Ely, is kind enough to bring to you the letters of my friend and venerated master, Mr. Huber, of which I have copied a great number in order to make them more easy to read. You may keep them as long as you desire, and may use them freely for your magazine. I will be happy if they can inspire a taste for natural history, together with a simple and fervent piety."

In all those letters, the striking fact is the religious sentiment of Huber, his conscientious spirit, his constant desire of giving credit to his predecessors and his skill in directing and understanding the experiments of his helpers. "I am more certain than you are of what I am telling you," said he to De Candolle, "for you publish that which your own eyes alone have seen, while I take the average of several testimonials."

It would be difficult to show greater philosophy and greater resignation to one's infirmity.

We may admire, also, the correction and clearness of his style, especially in the "New Observations," for we must not forget that he was an octogenarian when he wrote to Miss De Portes, and that his dictation was through two inferior clerks at least : the one to whom he dictated the letters and the one who copied them for the bound manuscript.

One was astonished at all that Huber had discovered ; one will be much more so after reading these letters, in which new views and the very best practical suggestions abound. After him, little has been discovered outside of parthenogenesis ; his observations were so precise and so positive that all the modern works, however considerable, have only proven a following of his and a confirmation of his, without amending them. For this reason I believe that the publication of his unedited correspondence will be welcomed with lively interest by bee-keepers in all countries, and I hereby republish the expression of my hearty thanks to Mrs. De Watteville, the Count De Loche, Mr. De Molin, and Mr. Edmond Pictet for their kindness in entrusting to my care, for publication, the unedited writings of the great observer of the bees.

EDOUARD BERTRAND (1897).

In our next instalment will appear the first of the letters written by Huber to Miss Eliza De Portes. These letters give a fascinating account of the observations of the great naturalist.

(*To be continued.*)

Week-End Bee-Keeping.

(By S. H. SMITH, Cambridge.)

(*Continued from p.* 123.)

I have chosen this spot, as it commands a view of the six single-brood chamber-hives in front of us. While we are eating our breakfasts I will put before you some possibilities of bar-frame hive bee-keeping as worked nowadays.

Now, if you were a real bee-farmer, D.B., in the bee business to get all you could out of it, you would see in those six stocks the possibility of developing eighteen good nuclei. You would advertise accordingly, and promise delivery any time up to the end of June. And customers would wait patiently for you to produce them. This would mean pocketing at least £2 10s. per nucleus, even in 1922, when hard cash is scarce.

We could call this our first dividend, as we should still possess six fairly strong stocks of bees which would gather a fair crop of honey. Putting this at only 40 lbs. per stock, and figuring the 240 lbs. worth only 1s. per lb., this second dividend would not be despicable.

Don't choke and splutter, D.B. I will put it down on paper as plainly as possible.

Eighteen nuclei at £2 10s.	£45	0	0
240 lbs. of honey at 1s.	£12	0	0
	£57	0	0

Now, do not imagine that that means all profit. You will have to deduct a good sum for expenses. And kindly note I said *if* you were a *real* bee-farmer. You would have to have had some years of experience, and to have gained the confidence of your customers, like any other honest and reliable business man.

To be able to head your nuclei with Italian queen bees you would have to buy them ahead, or else to rear them. The latter would take time and capital. It takes money, labour, time, and knowledge to nurse along queen-rearing stocks. If you bought the queens you would have to send cash a good time ahead.

I won't go into the costs of queen-bee rearing, as you do not yet understand enough about bees. But we will imagine we have bought twenty Italian queen bees for the eighteen nuclei, allowing 10 per cent. for accidents in travel and introducing. There would disappear £7 or £8. You would also have to have at least three nucleus shipping boxes, costing, say, 6s. each. These would reappear in your inventory sheet, of course, but you would have to buy them first. Jam jars, for feeding, you will have in the house, but there would be charges for advertising, postages, freights and cartages, etc., not forgetting the loss of thirty-six good combs out of your apiary. All these would mean a good chunk bitten out of the £57. Let us put them down and see what we have left.

	£	s.	d.
Twenty imported Italian queen bees at 8s.	8	0	0
Three shipping boxes at 6s.	0	18	0
Advertising 10s., cartages and freights £2 10s.	3	0	0
Thirty-six drawn-out combs, lost to apiary, at 2s. 6d.	4	10	0
Postages 5s., quilts 5s.	0	10	0
	£16	18	0

Allowing for wind and weather, loss of bees and incidental troubles, call it £17; deducting this from £57, and you have £40 left, or a profit of £6 13s. per stock. Now, supposing you sold the six stocks you have left instead of waiting to gather a honey crop, they would fetch possibly £5 each, but let us call it £4, or another £24; but you would only gain £12 by this move, as you would lose the honey. Mull it over, old man. This bee business is not a bad game for a disabled soldier with a sound head and some money.

How long has this been going on? Light your pipe, D.B., and keep calm while I explain a bit more. The bar-frame hive system beat skep bee-keeping, but the latter system is thousands of years old, and something like the methods I've disclosed above have been in use for just as long. There is a lot to be said for skep bee-keeping. It is simple and cheap. You will make more money out of bar-frame hives, but these take much more capital to establish in numbers and plant.

Then, again, not everyone is fitted for the bee business. As many are called and as few are chosen in this as in any other line. We do not yet know if you will take to it, but from what I know of you I am willing to take a chance that you *will* succeed.

The bee business is a leisurely one, D.B., if you use a good system. You do not want to rush apiary work unless you have to. In another hour or so we may get to work with the bees. By 11 a.m. the temperature should be 70 deg. Fahr. in the shade; it barely reaches 65 deg. Fahr. now, and we do not open hives until it is that, for fear of chilling brood. Now we will nail up some frames, wire them, put in foundation and embed it. It will not take you long to catch on. Get a right start and you can't go wrong. All the while we are working at this simple task we can talk matters over.

Personally, I do not care for single-brood chamber stocks, but when one takes up the bee-man's burden one can't have everything one's own way. I want my stocks in double-brood chambers early in the autumn. This cuts the labour cost in two, and saves three-quarters of the time in the spring; and no stimulating feeding is necessary. One brood chamber will be full of bees and the other full of honey.

Now, I have been gently stimulating those six bee stocks for the past two weeks by giving them a little syrup every evening. If fed too much the bees would store and seal it, and maybe crowd the queen, so that swarming would result. Each stock gets just four fluid ounces per evening—no more, no less.

There! There are a couple of dozen frames nailed up and wired. Let us put the foundation in and embed it.

We will then take a look at some of the stocks, and you will see everything done under your eyes, and that beats reading about it.

(*To be continued.*)

Questions, &c, for Bee-Keepers for Self-Examination.

(*Students are recommended to write their answers, and check them afterwards by reference to books.*)

645. Explain fully the utility of an observatory (or observation) hive to a bee-keeper.

646. What manipulation is necessary to encourage the filling of very early sections?

647. What should be the nature, and the object, of the first examination of a hive of bees in the early part of the year?

648. What conduces to the balling of a queen, and what can the bee-keeper do by way of prevention?

649. How are syrups for autumn feeding and spring feeding made?

650. Show how increase in number of colonies can be made without waiting for swarms.

J. L. B.

Cotswold Notes.

RE-QUEENING AND QUEEN INTRODUCTION.

The foundation of successful bee-keeping undoubtedly lies in keeping good stock headed by young, prolific queens.

No matter how good the hive may be, or how enthusiastic the owner, it is essential for the bees to be strong in numbers and of a thrifty, honey-gathering strain, if the best is to be obtained from the pursuit of bee-keeping.

Bee-stocks, in their natural condition, ensure young queens each season by casting one or more swarms each.

Honey production requires that the swarming impulse shall be restricted in order to maintain a large working force during the summer months.

If bees are thus deprived of the necessity for swarming they must be supplied with young queens at periodic intervals in order to keep the strength of the colony from dwindling, and avoid the evils which generally follow it.

A queen may prove unsatisfactory and require replacement for several reasons.

She may be a worthless drone breeder in the spring, or she may be unprolific. Her prolificness is likely to be reduced after the second season, thus failing to maintain the large population that is needed for getting a maximum honey yield.

During the active season stocks found queenless should be supplied with queens with as little delay as possible. Although queenless stocks will, during a honey flow, accumulate considerable natural stores, the lessened number of workers renders them likely to be robbed. Little or no work is ever done in supers by bees in a queenless condition.

WHICH IS THE BEST TIME?

Queens may be introduced with comparative safety any time from the end of April, and when May is in supplies of queens are usually plentiful.

In districts where the honey flow is late it is sometimes—when increase is desired—possible to sub-divide colonies during the middle or latter part of May, introducing young queens to build up the divisions as strongly as possible before the honey flow commences.

All things considered, the termination of the honey flow provides the best time for replacing failing queens, when most, if not all, of the supers have been removed.

During August and September the price of queens is usually reduced.

It occasionally happens that stocks, after the flow, require strengthening as well as re-queening, to enable them to survive the winter. To meet such cases it is an excellent plan to form several 3-comb nuclei from colonies which can spare the bees. These should be given queens; and virgins will be found most useful for running into these small nuclei. Frequently, by the time that they are required, the nuclei will have grown to the size of small stocks, and are most valuable for bringing up to full strength colonies with little brood and a scarcity of foragers. The addition of a large proportion of young bees to any colony in the autumn is one of the best means of making sure of its survival of the winter. A. H. BOWEN.

Cotswold Apiaries.

"When is a Bee Dead"?

After the experience we have had recently one would be almost inclined to say "Never."

On New Year's night, after finishing off singing in the village kirk choir,

"Standing at the portal
Of the opening year,
Words of comfort meet us
Hushing every fear,"

we went down to a garden we have on the river-side, where Blacks are kept for experimental purposes. There we found the Beauly River had overflowed its banks, and approach to three stocks was blocked by a flood. One bar frame hive of local make had a hinged top, and into this hive for shelter during the winter we had placed and packed a skep resting on top of the frames. About 10 o'clock that night this hive was floating about the garden, which it continued to do all night and until 7 next morning, when the bank of the river gave way and the rushing water carried garden fence and all right down the stream. Luckily the soaking that the hive got swelled out the wood and fastened on the top; it floated about a mile down before coming near to the side, where, water-logged, it was pulled ashore. When we opened it up we found the skep inside had been pitched about and was soaked through and through; fortunately cross sticks had kept the combs in position, but nothing was to be seen about the skep but straws, rubbish, and black dripping bees. On a barrow home we brought the warrior—as we thought—dead. Being a Bank Holiday, with time to spare, for a lark we set up the hive, putting the skep in position above the frames, and on the top placed a rubber hot-water bottle to see what heat would do. The odds on "Paragon" would have been a trifle as compared with those I would have given against a living bee turning up. Two hours after we looked into the hive, and, behold, about six appeared.

We then set about the matter in dead earnest, from time to time refilling the bottle with boiling water, wrapping it up in a piece of old blanket, and placing it on the top of the skep. To-day (February 24)—*mirabile dictu*—the stock has revived, and to all appearances its queen is still reigning.

This district is in the midst of its first invasion by Acarine disease, and when one sees the apparent ease with which stock after stock falls before that fell tyrant, one is inclined to think that our friend, the bee, has not by any means the strength and stamina it really has. After our experience we vote it one of the hardiest creatures under the face of the sun.—GEO. H. PRITCHARD, Hon. Sec. Inverness-shire Bee-keepers' Association, Firth View, Beauly.

British Bee-Keepers' Association.

A Council meeting was held at Pritchard's Restaurant, 79, Oxford Street, W., on Thursday, March 16, 1922.

The chair was taken by Mr. T. W. Cowan, and there were also present Miss M. D. Sillar, Miss M. Whyte-Johnstone Sir Ernest Spencer, Messrs. W. F. Reid, W. H. Simms, G. J. Flashman, G. Bryden, C. L. M. Eales, A. Richards, E. Walker, F. W. Harper, Association representatives, R. R. Babbage (Middlesex), G. Hayes (Notts).

Mr. Eales, in proposing that Mr. Reid be chairman, paid tribute to the splendid work which he had done for the Association. Mr. Cowan, in seconding, endorsed, and added to the previous speaker's remarks, and also expressed his thanks to Mr. Reid for his able management during his (Mr. Cowan's) enforced absence during the past few years.

Sir Ernest Spencer and Mr. Bryden supported the nomination, and spoke of the good work done by Mr. Reid. This was carried unanimously.

Mr. Simms, in proposing the election of Sir Ernest Spencer as vice-chairman, expressed the view that each year the vice-chairman should automatically move up to the chair. This, he believed, was done in some associations, and he knew it was done in institutions of a similar nature. He made the suggestion in the first place as he thought it unfair to place the responsibility and work upon one individual year after year, and, secondly, that the honour could go round and not be a sinecure. Mr. Reid seconded the election of Sir Ernest Spencer, and it was carried unanimously. Sir Ernest, in accepting the office, said it came as a surprise to him, but if it was their wish he would accept office for one year.

Mr. Bryden proposed, Mr. Reid seconded, the election of the hon. secretary and assistant hon. secretary, and it was carried.

The following new members were elected: Miss H. Giles, Miss V. Pratt, Messrs. H. Hanbury, G. W. Fradd, Newton and Clarke, and St. G. de Carteret.

The following Associations nominated representatives on the Council, and all were accepted: Aberdeenshire and Kincardineshire, Northumberland, Gloucester, North Devon, Worcestershire, Suffolk, Nottinghamshire and Twickenham and Thames Valley.

Next meeting of the Council at 23, Bedford Street, Strand, London, W.C.2, on April 20, 1922.

Barnet and District Bee-Keepers' Association.

ANNUAL MEETING.

The fourth annual meeting since the re-starting of the Barnet and District branch of the Herts County Beekeepers' Association was held in the Church House on Saturday, March 11. Mr. F. C. Tidmarsh, the president, took the chair, and there was a large attendance of members.

Mr. P. W. Jefferies, the treasurer, presented the financial statement, which showed a balance of £3 13s. 5d. in hand, which was regarded as very satisfactory. The balance-sheet in connection with the honey show revealed a deficit of £6 18s. 4d. This, however, had been lightened by the help of a donation of £5 from the Central Fund.

The secretary, Mr. Norris Toms, read the report, which stated that 58 members were on the Society's register. Mr. Toms went on to review the activities of the Society during the past year, and said that from the bee-keepers' point of view the season had been a good one. A large amount of honey had been secured, as much as from 60 to 80 lbs. having been taken from some stocks.

After the usual votes of thanks to the retiring officers, they were all re-elected for the ensuing year. They are:—President, Mr. F. C. Tidmarsh; honorary secretary, Mr. Norris S. Toms; assistant secretary, Mr. Charles Bowell; treasurer, Mr. P. W. Jefferies; committee, Messrs. M. Doyle, H. C. Francis, W. D. Ridley, B. E. Scott, B. Webb, T. A. Webb, and A. Wilson.

Following the general meeting, Mr. Norris Toms gave two short lectures illustrated with his popular lantern slides. The subject of the first lecture was "Acarine disease" (better known as the Isle of Wight disease). With the help of a number of photo-micrograph slides, the lecturer explained the cause of the disease, and traced its development through various stages. In his second lecture, Mr. Toms told how 300 lbs. of honey was procured. Both lectures were highly instructive and interesting. After some questions had been answered, a vote of thanks was passed to Mr. Norris Toms, and to Mr. A. C. Bowell for kindly manipulating the lantern.

Bee-keepers and others wishing to join the Barnet branch of the Society should apply to the honorary secretary, Mr. Norris S. Toms, 60, Fitzjohn Avenue, Barnet.

Northamptonshire Bee-Keepers' Association.

The annual general meeting was held at Northampton on Saturday, March 18, when Mr. C. W. Phipps presided over a good attendance.

The hon. secretary, Mr. H. F. Swann, presented the report for last season, which proved very satisfactory. An increase of twelve in membership over last season was reported, and several prospective members were in view.

A large number of visits were made and help given to various members, and several lectures given during the past year.

At the annual show in August, 1921, 600 lbs. of Northamptonshire honey was staged for exhibit, and it was hoped this amount would be increased this year.

The hon. treasurer's (Mr. P. Stayley) report proved very satisfactory, showing a balance in hand of £11 0s. 8d.

The chairman moved the adoption of the report, which was carried unanimously.

The election of officers resulted as follows: President, Mr. C. W. Phipps; vice-presidents, Earl Spencer, K.G., Marquis of North-

ampton, Lady Knightley, Hon. Mrs. Pomeroy, Mrs. Attenborough, Mrs. A. W. Guinness, Mrs. D. C. Guthrie, Mrs. J. G. Sears, Mr. F. Bostock, Colonel Norcott, Major Hesketh, Capt. Henderson, Mr. H. Manfield, Mr. J. Manfield, Mr. J. Roe, Mr. Stanley J. Watson; hon. secretary, Mr. H. F. Swann; hon. treasurer, Mr. P. Stayley; auditor, Mr. P. J. Pratt; press correspondent, Mr. M E. Dixon; committee, Messrs. E. Dixon, G. Dixon, H. Stevens, G. H. S. Scriven, W. Snedker, H. J. Willmott; hon. stewards, Messrs. R. Hefford. W. Snedker, A. J. Swann.

It was decided to hold the show in conjunction with the Northamptonshire Horticultural Society in August

The autumn meeting held last year proved such a success that it was decided to hold a similar meeting this year, and it was left with the committee to make arrangements.

It was decided to purchase an extractor, which would be loaned to members at a nominal fee.

It was also decided that an examination for those wishing to obtain the bee-keepers' certificate should be held during the present season.

A vote of thanks to the chairman closed the meeting.

(*Communicated.*)

CORRESPONDENCE.

The Bryden Incident.

[10640] On the face of it, this is a local matter, and therefore should have had no ventilation in the JOURNAL, but in reality it is of wider significance, and the details of which clearly show what petty jealousies may lead to and what reward may be meted to an enthusiastic and mature leader in endeavouring to regenerate his Association.

I need hardly point out that Mr. Bryden *never* mentioned in your columns that he wrote in an official capacity, and it was obvious to everyone acquainted with letter-writing that he merely indicated he was a Kentish man, in a position to know what he was writing about. Instead of taking heed of his warning or refuting his statements publicly, the Council of the Kent B.K.A found it more convenient (for the gratification of its demagogues) to misrepresent his words and aims, and to destroy by expelling him one of the mighty pillars of the Association, which alone will lose by such a blunder.

I note that Mr. Bryden went, in trying to meet the pressing request of some of his colleagues for reconciliation, to an extreme compliance with their wishes. But so long as petty jealousies continue to be encouraged those who are striving unselfishly to serve bee-keeping will have often to be content with insults and abuse. Would not more co-operation and goodwill be more appropriate and helpful?—A. STRANGER.

[In reference to the first few lines in the above letter, we pointed out in our note referring to this matter on page 81 of "B.B.J." for February 23, that the letter from Mr. Bryden in the JOURNAL for February 23 to which the Council of the Kent B.K.A. took exception, was written in support of letters from Rev. H. Newman published previously in the JOURNAL, which was therefore the proper medium for the further ventilation of the matters to which they referred.—EDS.]

Conference at Reading.

[10641] In view of the interest shown in Dr. Rennie's recent lecture, now being reproduced in your columns, I venture to beg a little of your valuable space to call the attention of readers to the open conference to be held under the auspices of the Apis Club at Reading on April 8 next. Dr. Rennie, president of the Club, will deliver the address, and many subjects of outstanding interest to all bee-keepers, commercial and other, will be discussed and resolved upon.

The riverside run from Paddington is a very pleasant, rapid and easy one, accommodation easily obtainable, and the opportunity for participating in a most important concourse of bee-men are not to be lightly missed. A. F. HARWOOD.

QUERIES AND REPLIES.

Confining Bees to Hive.

[9,936.]—I shall be glad if you, Mr. Editor, or any reader, can give me any information as to confining bees in their hives, for, say, a day or even half a day, during the height of the season. My garden is small, and, being new, there is, as yet, no fence, except wire, to screen it from the adjoining field, although I shall sow beans or tall peas My stocks are 10 yards from the fence, and although the bees are quiet, one cannot persuade the farmers' men that they are harmless if not interfered with, and when working near, the men invariably have their arms working like windmills, fighting the flying bees

The ploughing working and sowing is done while the bees are not active; but when the corn is to be cut I would, rather than annoy the men or take any risks with the horses, confine the bees to their hives for the short time necessary for reaping.

The only time I saw this done, it was not at all a success, for the bees clustered on the perforated wire placed over the entrance, and it being hot, as one expects it to be when harvest is on, there was a big casualty list.

I have never tried the Claustral System, illustrated in the "Guide Book," and as no Claustral hives now appear in the catalogues, it would seem that they had not been a suc-

cess. Any hints or experiences on this subject through your columns would be greatly appreciated by FRANK HATTON.

[If the bees are confined to the hive for a day at that season the results are likely to be disastrous. The bees will become excited, and overheated, and will probably suffocate. A row of runner beans a few yards from the front of the hives will probably cause the bees to fly high over the heads of anyone in the field. If you do confine the bees, as you suggest, give as much ventilation, both bottom and top of the hives as possible. Take off the quilts, and cover the tops of the frames with a sheet of perforated zinc, preferably tacked on the top side of a wooden frame. EDS.]

Notices to Correspondents

"NOVICE" (Wisbech).—*Treating hive infected by wax moth.*—Fumigate the hive with sulphur, and when stocked with bees keep some Apicure on the floorboard. Honey is the best food for bees.

"ANXIOUS INQUIRER" (Glos.).—*Small drones in hive.*—Judging from what you say we are afraid the queen is a drone breeder. A laying worker would not be tolerated by a colony having a queen

H. P. H. (Doddington). *Making candy from honey.*—We do not recollect a satisfactory recipe for making candy from honey only. If you want to use honey in candy better make "Scholtz" or "Goods" candy. Mix together warm liquid honey and finely powdered sugar until the consistency of stiff putty is reached. Allow to stand, and work in a little fresh sugar on several succeeding days.

Transferring bees from skeps.—Adopt the usual plan as given on p. 149 of the "Guide Book." The plan of driving the skeps until the queen is secured, then placing the skep over frames of foundation with a queen excluder between them, and running the bees and queen on to the foundation is not a good one. The probability is that during a cold night or a spell of cold weather the bees will all cluster on the brood in the skep, leaving the queen all alone below.

"ALFRISCO" (Derbs.).—*Drone control.*—After keeping drone comb down to the minimum, those that are reared may be trapped. Any appliance manufacturer will supply a drone trap for about 5s. 6d.

Bee Shows to Come.

May 24-27 at Guildford.—Surrey B.K.A. Show. Two Challenge Trophies, Apis Club Silver Medal, B.B.K.A. Silver and Bronze Medals and Certificate, Surrey B.K.A. Silver and Bronze Medals, Open Classes Honey, Wax, Appliances, etc., Demonstrations, Lectures, etc.—Hon. Secretary, W. E. Hamlin, 43, Norbury Court Road, Norbury, S.W.16.

Royal Show, Cambridge, July 4 to 8.—Over £40 in prizes. All classes open.—Schedules and all information from Mr. E. C. R. Holloway, Burwell, near Cambridge. **Entries close May 20.**

July 26-27, at Cardiff, Sophia Gardens.—Glamorgan Bee-keepers' Association, in connection with Cardiff and County Horticultural Society's Show. Open Classes. Special prizes: Taylor's W.B.C. Hive and Apis Club Bronze Medal.—Schedules from Secretary, Chas. F. Davies, 5, Borstal Avenue, Cardiff.

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One Penny per Word.

Trade *advertisements of Bees, Honey, Queens, and Bee goods are not permissible at above rate, but will be inserted at* **1½d.** *per word as* **"Business"** *announcements, immediately under the Private Advertisements. Advertisements of Hive-manufacturers can only be inserted at a minimum charge of 6s. per ¼in., or 12s. per inch.*

PRIVATE ADVERTISEMENTS are only intended for readers having **Surplus Stock** *to dispose of.* **Driven Bees, Nuclei,** *and* **Queens that are reared or imported for sale,** *are Trade Advertisements, and can only be accepted under trade terms. A charge of 6d. extra per insertion will be made if a box number is used.*

Advertisements must reach us NOT LATER than FIRST POST on MONDAY MORNING for insertion in the "Journal" the same week.

Orders for three or more consecutive insertions in "The Bee Journal" entitle advertisers to one insertion in "The Bee-Keepers' Record" free of charge.

PRIVATE ADVERTISEMENTS.

WILLOW HERB, plant now, blossoms July till frost, 12, 2s. 6d. BOWEN, Apiarist, Cheltenham. c.193

FOR SALE, a few 8-frame Stocks of Dutch Bees with young Queens, prolific strain, 60s. each. May delivery. HALL, Nateby, Garstang, Lancs. c.171

ITALIAN HYBRIDS, Simmins' strain, Stocks, 5-comb 35s., 10-comb 65s.; delivery April; must sell owing to removal; box 10s., returnable. ERNEST GRIFFITHS, Helsby, Cheshire. c.174

OVERSTOCKED. Six strong Dutch Colonies, all wintered, 1921 Queens, guaranteed free from disease, April delivery, £3 each, carriage paid; boxes 10s. extra, returnable; bargain. MRS. SMART, The Nook, Bures, Suffolk. c.175

PRIME natural healthy May and June Swarms, Italian and Hybrid, 7s. and 6s. 6d. per lb., carriage paid; empty boxes to be returned paid. S. BAILEY, Oak Field, Two Mile Ash, Horsham. c.176

FOR SALE, two 8-frame Stocks pure Italians, 65s., and two 8-frame Hybrids, 60s.; 1921 Queens. J. F. MORRIS, Tycanol Farm, Caerphilly. c.177

BEES. Italian Swarms from healthy immune strain, May and June, 30s.—W. YOXALL, Oaken, Wolverhampton. c.179

THREE W.B.C. HIVES, £2 10s.; C. HALE, 2, Kennington Road, Lower Weston, Bath. c.180

HONEY, first quality sections, 18s. dozen. R. COUSINS, The Rosary, Misterton, Doncaster. c.181

A FEW good Stocks of Bees for Sale on 10 standard wired frames, 1921 Queens, splendid honey gatherers, quick delivery, approval, 75s.; travelling boxes 10s. extra, returnable.—W. HUNT, The Croft, Christchurch, Hants. c.182

TWO strong Stocks Italian Bees, guaranteed healthy, 10 frames and W.B.C. Hives, £5 each, or £9 10s. the lot. WIGGINS, The Bungalow, Norton Road, Wembley. r.c.199

SURPLUS STOCKS.—Dutch Hybrids, 1921 Queens, proved working strain. April delivery; 10 frames, 75s.; 6 frames, 55s.; box 10s. extra, returnable. — LAYCOCK, Bee Expert, Market Lavington, Wilts. c.200

For best bees, queens and appliances come to PEARSON & GALE, Marlborough.

EXPERT, thoroughly practical, 40 years' experience all branches, honey raising a speciality, including heather, make all woodwork, appliances, open to engagement; honey raising apiary preferred; reasonable pay only expected.—Box 57, BRITISH BEE JOURNAL, 23, Bedford Street, Strand, W.C.2. c.134

FIVE STOCKS for Sale, complete with hives (new), Masheath and W.B.C. Allbons strain, all 1921 Queens (two Penna's), £5 per stock, or offer; also Extractor, several spare Hives and Accessories; purchaser to remove.—Apply, SECRETARY, Parks Department, Birmingham. c.135

FOR SALE, 7 cwt. pure Welsh Honey; best offer; sample 6d.—JAMES, Adpar, Newcastle Emlyn. r.c.137

FOR SALE, Observatory Hive, by Dixon, made of mahogany, 1st prize Royal Show, Liverpool, in perfect order, complete with three brood frames and supers of shallow comb and sections.—For particulars and price to C. L. M. EALES, "Dilkusha," Tiverton, Devon. c.139

SURPLUS STOCKS.—Italian Hybrids, 1921 Queens, 8/10 standard frames, April delivery, guaranteed no disease, £4 10s. each, free on rail.—Box 58, B.B.J. Office, 23, Bedford Street, Strand, W.C.2. r.c.142

CHANNEL ISLES.—Model Apiary for Sale; "Isle of Wight" disease unknown; no rival apiarists; good local sale for honey at big price; good breeding station for export; capable of extensive enlargement; opening for poultry farming in conjunction; lovely climate; exceptional opportunity.—PENROSE, Havelet, Guernsey. r.c.91

TWO strong Dutch Colonies, April delivery, £4 each, or nearest offer.—MISS CHEAPE, St. Andrews. r.c.95

OVERSTOCKED.—"Every colony wintered." 10-frame Stocks pure Italians, Penna or Buckfast 1921 Queens, delivery April, 75s., carriage paid.—WADHAM, 5, Gold Street, Cardiff. r.c.109

EGGS, per dozen, box returnable.—Agnew's Champion Black Orpington, 18s.; Barron's White Wyandotte, 15s.; Carter-Hunter White Leghorn, 10s.; Taylor White Runner Duck, 10s.; Utility Fawn Runner Duck, 7s.; packed, carriage paid; excellent layers.—GRISELDA CHEAPE, St. Andrews, Fife. r.c.94

3 CWT. finest Buckinghamshire Honey from the Chiltern Hills.—28 lbs., £2; 56 lbs., £4; 1 cwt., £7 10s., or £21 the lot; carriage forward; tins free. Also three exceptionally fine, healthy Stocks, Italian Hybrids, 10 combs packed with stores, brood and bees; no disease; delivery early April; £4 10s. each.—STEVENSON, Thames View, Flackwell Heath, High Wycombe, Bucks. r.c.110

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OUR 1922 CATALOGUE

The Largest Bee Appliance Manufacturers in Europe.

White Candy—4 lbs., 5/- post free; 10 lbs., 11/- post free. Glass top boxes (2 lb.), 4 lbs. 5/- post free.

E. H. TAYLOR, Ltd., BEEHIVE WORKS, WELWYN, HERTS.

SURPLUS.—Stock of Bees on 10 frames and Hive; healthy. — CARTER, "Goldsands," Southminster. r.c.138

STRONG, healthy Italian Hybrid Bees, May and June Swarms, 30s., carriage paid; box 5s., returnable.—H. ROBINS, 290, Priory Road, St. Denys, Southampton. r.c.128

SEVERAL surplus Stocks, Italian and Hybrid, very strong, satisfaction guaranteed, April or May delivery, 70s.; box 10s. extra, returnable.—COURTNEY, Murray Road, Northwood, Middlesex. c.173

HAVE A FEW more strong Stocks Hybrids on six standard frames, wired combs, 1921 Queens, good working strain, for April delivery, 50s., carriage paid.—WM. CHANNELL, Grove Apiary, Histon, Cambs. c.166

20 STRONG STOCKS ITALIAN HYBRIDS, good working strain; free from disease; satisfaction guaranteed; April-May, 80s., carriage paid; Hive, 20s.; box 10s. extra, returnable.—REV. COOPER, 62, Park Hill, Carshalton. r.c.153

SWARMS wanted, April-May; weight and quality guaranteed.—Offers to "BEE-MASTER," 1, Park Crescent, Sheffield. c.86

OWING to failing health I must sell my Italian Bees and W.B.C. Hives. Bees strong and healthy, 1921 Queens, hives nearly new, just repainted. What offer? — DOBSON, Hunton Bridge, Herts. r.c.89

DUTCH BEES.—A few Skeps of Dutch Bees, imported last autumn, 30s. each, carriage forward. Cash with order. — J. HERROD-HEMPSALL, 23, Bedford Street, Strand, W.C.2 c.186

BEES.—14 Stocks, free from disease, £2 per stock. Pure Honey, 1s. per lb., in 12-lb. tins. Have about 2 cwt.—J. J. WRIGHT, "Glendower," Commercial Road, Dereham. r.c.170

20 ITALIAN STRONG STOCKS for Sale, guaranteed free of disease, Penna and Bozalla Queens, £3 10s., carriage paid, in returnable travelling box, 10s. Honey, finest quality, in 1-lb. screw top bottles, 1s. 9d. each, packed free on rail.—WALKER, Symonds Hyde, Hatfield, Herts. r.c.49

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(1½d. per word.)

THE WISE BEE-KEEPER looks for quality. The South Hampshire Apiaries breed only from the very best strains. Result: Quality and satisfaction. Beginners' Outfits from £5.—All communications, H. E. NEWTON, New Milton, Hants.

GRAFTON ITALIANS are highest grade Bees. Early Nuclei, 3 frames brood, 1922 Queen, crowded bees, £2; 4-frame ditto, £2 10s.; all carriage paid.—Particulars, MASOM & HEDLEY, Grafton Regis, Stony Stratford. c.187

Orders booked now for April Stocks. Catalogues now ready. PEARSON & GALE, Marlborough.

NUCLEI, Italian Hybrids, May and June, 4 frames, 42s.; 6 frames, 60s.; carriage paid; cash with order; rotation. W. WRIGHT, 61, Vicarage Road, Wollaston, Stourbridge. r.c.184

I have a limited number of copies of the February "Bee World," containing review of my "Clyde" Hive, which the first applicants, enclosing 4d. stamps for my five brochures, can have post free. "The Bee World" is well worth the ninepence charged for it; if you are prompt you can have it for fourpence.

JAMES B. BALLANTYNE,
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"THE NEW FIRM."

1. The Improved Convertible Unitive, for standard, deep standard, Commercial and 14 in. x 11¼ in. frames.

2. The "Clyde" Bee-hive for busy beemen who heather go. Reduced frame topbars to suit single wall collateral construction.

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6. The "Casement" in-the-house Hive. See "B.B.J." for February 23 advt.—J. B. B.

c.183

GEO. HULBERT begs to announce that he has been appointed Agent for Signor Tortora, Ozzana, Emilia, Bologna, Italy, breeder of choicest Queens. These beauties cost no more than inferior ones. May, 10s.; June 9s. Reduction for ten. Book now and ensure satisfaction.—Address, "Châlet," Warwick Road, Olton, Birmingham. c.189

THE UTILITY HIVE, complete, 35s.; packing free; surplus stock; new.—HALL, 69, Adelaide Road, Southampton. c.191

IMPORTED Carniolan Queens, from June, 9s. Send for list.—E. WOODLEY, Thorne, near Doncaster. r.c.194

THE BEST INVESTMENT is an Ambrosian 6-comb Stock, 60s.

AMBROSIAN STANDARD SWARMS, 3 to 4 lbs., 45s., May 1-15.

ITALIAN ALPINE QUEENS, direct from Alpine Italy, hardiest of all the Italian race, 7s. 6d.

THE AMBROSIA APIARIES, S. Farnboro', Hants. c.201

STRONG NUCLEI, finest Italians, 3 frames, 30s., delivered May and June.—E. COOMBER, 64, Ronald Park, Westcliff-on-Sea. c.172

ENGAGEMENT DESIRED.—Expert, well on in years, life experience queen and nuclei rearing, honey raising, all kinds, and packing, all ditto for transit; could manage large apiary, or build up from smaller; wood worker; good references.—Box 59, British Bee Journal, 23, Bedford Street, Strand, W.C.2. c.185

PENNA QUEENS.—Please note precise address: ENRICO PENNA, Casella Postale 178, Bologna, Italy. r.c.141

IMPORTED 1922 ITALIAN QUEENS, 10s. Nuclei, 3-frame, 35s.; 4-frame, 45s., headed imported Queens; May delivery; cash with order; rotation.—HENSLEY, Luton Apiary, Chatham. c.178

STOCKS genuine Swiss Bees for Sale. Write for Descriptive Circular. — DAVIDSON, Forest Road, Burton-on-Trent. c.195

STRONG, healthy Dutch Bees in Skeps; reduced prices; immediate delivery. Write actual importer.—DAVIDSON, Forest Road, Burton-on-Trent. c.196

ITALIAN, Carniolan and Hybrid Stocks and Nuclei for Sale, strong and healthy, delivery April, May, low prices.—DAVIDSON, Forest Road, Burton-on-Trent. c.197

SWARMS BOOKED, May delivery, Italian, Carniolan, Dutch; low prices.—DAVIDSON, Forest Road, Burton-on-Trent. c.198

HONEY wanted, granulated; must be light; in tins; free sample and price carriage paid.—THOMAS, Burwell, Cambs. c.169

HAVE YOU READ "THE BEE WORLD"? If not, why not? Every number in itself is a useful literary work for practice and reference. Specimen copy free.—Offices: THE APIS CLUB, Port Hill House, Benson, Oxon.

"CARRIAGE PAID."—Honey Jars, screw tops, 39s. 6d. gross.—ERNEST GRIFFITHS, Helsby, Cheshire. r.c.97

"WIGHT" AND "ACARINE" DISEASES.—Prevention and removal; invaluable advice; 5s. 6d. "An eye-opener."—ALF. RYALL, 8, Ospringe Road, N.W.5. r.c.87

ITALIAN AND HYBRID NUCLEI from Penna and other excellent selected strains, 1922 fertile Queens, 3 frames, May 30s., June 27s. 6d., carriage paid.—MOORE, 31, Monmouth Road, Dorchester. r.c.106

COLONIAL HONEY FOR BEE-FEEDING.—Australian new white, 60-lb. tin 39s., two tins 77s.; finest West Indian, 56-lb. tin 41s. 6d., two tins 75s.; carriage paid Great Britain.—LONDON TRADING AGENCY, 32, St. Mary Axe, London, E.C.3. r.17

MIDDLESEX BEE-KEEPERS' ASSOCIATION.—A Course of six Lessons in Practical Bee-keeping will be given at the Model Apiary, S. Mimms. Inclusive fees: Members of the Middlesex Association, 7s. 6d.; non-members, 10s. 6d.—Syllabus and dates can be obtained from the HON. SEC., Middlesex Bee-keepers' Association, 23, Bedford Street, W.C.2. r.c.107

DUTCH-ITALIAN HYBRIDS, 4-frame Nuclei, £2 10s. These bees have proved most wonderful working and disease-resisting strain. No better bees can possibly be obtained, and owing to such a great demand on this strain last year I have only a limited number for disposal. Also Italian and Dutch, £2 5s., carriage paid. Cash with orders. Stamp reply. Apiaries at Ashford, Halliford, and Walton.—SEALE, Ashley Warren, Oatlands Chase, Walton-on-Thames, Surrey. r.c.116

FEW GOOD NUCLEI, headed by splendid Italian or Dutch Queen, 3 frames, 35s.; 4 frames, 40s.; May delivery.—SMALL, Moorlands, Harpenden. r.c.104

Package Bees.
May Delivery.
Write for Booklet.

BOWEN,
CHELTENHAM

Grand 2lb. Lots with Choice Fertile Queens
37/6
BOOK NOW.

EXCEPTIONALLY productive and healthy strain. Two stocks produced over 800 lbs. of honey in one season. 5-frame Nuclei of this strain now offered for April-May delivery at the special rate of 40s. (carriage paid), plus 10s. deposit on returnable box.—CHIVERS & SONS, LTD., Histon, Cambridge. r.c.16

NINE ITALIAN STOCKS with 1921 imported Queens, £5 11s.; eight with 1922 Queens, £3 15s.; six Hybrid Italian Stocks, 68s. 6d.; several 5-frame Nuclei with 1922 imported Italian Queens, £2 each; all carriage paid; spring delivery, and 15½ in. top bar to standard frame to suit "Wormit" commercial hive, of which I have had some hundreds in use for 16 years. State if clipped or unclipped queens are required.—THOMAS, Burwell, Cambs. r.c.121

SEVERAL STOCKS OF ITALIAN BEES, headed by Queens, the best obtainable.—8 frames, 80s.; 6 frames, 60s.; 4 frames, 45s.; Italian Hybrids same price; guaranteed healthy; box 10s. extra, returnable.—MYTTON, Lyncroft Apiary, Stafford Road, Lichfield. r.c.123

25/-.—WELL-KNOWN Breeder offers limited number 3-frame Nuclei of excellent working strain Italians, with young fertile Queen, delivered end of May-June.—Box 56, B.B.J. Office, 23, Bedford Street, Strand, W.C.2. r.c.124

FINEST ITALIAN NUCLEI, headed by Cannell's imported 1922 American Beauty Queens, 3-frame, 45s.; 4-frame, 55s.; carriage paid; travelling boxes returnable; satisfaction guaranteed.—HOGAN, Boxford, Suffolk. r.c.25

ALBERT HOPKINS, Breeder, Importer best Italian Stocks, Nuclei, Queens. Satisfaction guaranteed. Prices moderate, application. 25 years' practical apicultural experience.—Woodland Valley Apiary, Lyminge, Kent. r.c.26

FERTILE ITALIAN QUEENS, the best. April, 12s.; May, 10s. 6d.; 4, 38s.; 6, 56s.; 12, 96s. Special quotations 25 to 100 queens. Safe arrival guaranteed.—ATKINSON, Fakenham. r.c.40

ITALIANS.—Nuclei, 1922 Queens, 3-frame, May 40s., June 32s.; Colonies, spring delivery, 6, 8, 10 frames, 50s., 62s., 73s.; carriage paid; returnable crates.—ATKINSON, Fakenham. r.c.41

BRITISH bred Italian Nuclei and Queens. Prices on application. — CHARMAN BROTHERS, West Hill Apiary, Brookwood. r.b.4

WICKHAM BISHOPS ASSOCIATION is now booking orders for early delivery. Prices: 5-frame Nuclei, 50s.; Stocks on 10 frames, 75s.; Swarms from 25s.—Address, BEE-KEEPERS' ASSOCIATION, Wickham Bishops, Essex. r.b.76

QUEENS by return from April till October.—PEARSON & GALE, Marlborough. w.14

BUCKFAST QUEENS are the very best. 1922 Circular and Price List sent free on application.—REV. BR. ADAM, Buckfast, S. Devon. r.b.81

JACK TICKELL.—For Queens, Stocks and Nuclei. List free. — Westbourne Apiary, Cheltenham. r.a.54

DUTCH BEES.—Send for my artistically Illustrated Catalogue outlining my method of managing bees profitably. Read my notes on Queens and Queen Rearing. Will interest the expert and amateur. Free for the asking.—WHYTE, Bee Farm, Cumbernauld Station, Dumbartonshire. r.b.32

STRICTLY BUSINESS.—One dozen Flavine—8 Powders, 1s.; a Japanned Sprayer, post free, 6s.; a Floorboard Feeder, to fit under any hive, 10s., post paid.—S. H. SMITH, 30, Maid's Causeway, Cambridge. c.202

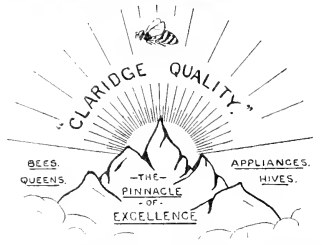
THE ACARINE 1921 ECLIPSE PAD.—It knocks out mites and moths. Your money back if not satisfactory. Price 5s., post paid.—S. H. SMITH 30, Maid's Causeway, Cambridge. c.203

FLAVINE CANDY, 4 lbs., 5s.; 6 lbs., 7s.; 10 lbs., 11s.; all post paid.—S. H. SMITH, 30, Maid's Causeway, Cambridge. c.204

BOOK NOW!—Choicest home-bred Carniolan Queens for 1922.—PEARSON & GALE, Marlborough. b.24

ADMINSON'S SEMI-COMBS.—Nuclei on these combs from mid-May at cheapest rates.—PEARSON & GALE, Marlborough. r.b.66

MANY NEW IDEAS NEW MEADOWS SYSTON, LEICESTER



F. M. CLARIDGE, Copford Apiary, Colchester

SKIPWITH CANNELL is pleased to announce that **American Beauty Nuclei** can be obtained for Spring delivery from

Mr. HOGAN, Boxford, Suffolk (See Business Advertisements.) Please order direct from him.

My 1922 American Beauty Breeding Queen has already brood in five combs (2,000 feet above sea level!). Her stock gave 117 lbs. of honey and 9 lbs. of bees in a year so poor that many stocks headed by queens of other strains failed even to secure their winter stores! Quality counts.

An American Beauty

May	June	July	Aug.—Oct.
12/-	10/-	9/-	— —

Safe arrival, prompt service and satisfaction guaranteed, of course——also gentleness, activity, beauty, hardiness, and disease resistance; blood will tell! I never mail a queen I wouldn't *like* to keep.

SKIPWITH CANNELL, The American Breeder of **American Beauty** Queens, **Aux Sieyes, par Digne, B.A., France.**

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The Bee-Keepers' Calendar.

APRIL, 1922

6 Thursday. "Nine green years had scarcely brought me
To my childhood's haunted spring—
I had life, like flowers and bees,
In betwixt the country trees;
And the sun, the pleasure, taught me
Which he teacheth everything."
E. B. Browning, "Hector in the Garden."

7 Friday. "Good is an Orchard, the Saint saith,
To meditate on life and death,
With a cool well, a hive of bees,
A hermit's grot below the trees."
Katharine Tynan Hinkson, "Of an Orchard."

8 Saturday. "Low hum of bees, and joyous interlude
Of bird-songs in the streamlet-skirting wood."
J. G. Whittier, "Pictures."

9 Sunday. "If thou wilt have the favour of thy bees, that they sting thee not, thou must avoid such things as offend them: thou must not be unchaste or uncleanly; for impurity and sluttiness (themselves being most chaste and neat) they utterly abhor."—*Charles Butler*, 1609.

10 Monday. "To lie and listen—till o'er-drowsèd sense
Sinks, hardly conscious of the influence—
To the soft murmur of the vagrant Bee."
Wordsworth, "Vernal Ode."

11 Tuesday. "I never hear the Zummer hums
O' bees; and don't know when the cuckoo comes;
By night and day I hear the bombs
We threw at Valencieën."—*Thomas Hardy, "Valenciennes."*

12 Wednesday. "The calf, the goose, the bee,
The World is ruled by these three."
(Meaning that waxe, pennes, and parchment sway all men's states.)—*Joh. Gwillim, "A Display of Heraldrie*, 1611."

Diseases of Adult Bees.

WESTMINSTER HALL LECTURE.

(*Continued from page* 143.)

Contrasting Nosema and Acarine diseases, Dr. Rennie said that often in the former individual bees affected with Nosema would work till they dropped, and there was not the same collective crawling found in the latter disease. Nosema-infected queens were fairly common. Nosema disease develops rapidly in the individual bee, but not so in the colony. A disease that develops slowly in the colony can be controlled by fast breeding. Loss of the queen is one of the possible features of Nosema disease. It does not in ordinary cases destroy colonies so rapidly as Acarine disease. It was possible that the parasite was more pathogenic in this than in other countries; *e.g.*, it was evidently common in Italy, from which practically no report of adult bee diseases come. In America it is not looked upon as very serious. With regard to Acarine disease, a lot had been said regarding the name, and there was no need to go over the ground again. "Isle of Wight" was not a scientific name, and in fact covered the three, and possibly more, specific diseases. Besides *Tarsonemus woodi*, other mites had been found on the bee, but *T. woodi* was so far the only one known to *breed* in the tracheæ of the bee. The infection appeared to be carried from bee to bee by the female mite, when on the point of ovipositing, migrating from her host to another bee as opportunity offered She might go direct from bee to bee, or she might be left in a flower and attach herself to the next bee visitor to the same blossom. On the whole, he did not think that this was a serious mode of transmission, but casual merely. Dr. Rennie said beekeepers must get into the position of detecting the disease long before the crawling stage had been reached. Provision for early diagnosis must be made, and bee-keepers must have facilities for early examinations of their bees. It was quite impossible for one organisation to examine all stocks; such a scheme was too big to be worked from one centre. County authorities might take up the work, and commercial bee-keepers should engage a competent scientist to report on their stocks.

Several questions were asked. Mr. Ryall asked if the bronzing or blackening of the tracheæ denoted Acarine disease. Dr. Rennie said he had found cases with bronzed tracheæ where there were no Acari, but had been; in other cases it was due to other irritating causes. We asked if it had been determined how long the mite would live apart from its host, or after the bee was dead. Dr. Rennie said that so far as they knew at present the mites only live a comparatively short time apart from the bee, or after the bee was dead (5 days). Dr. Rennie was asked if a remedy had yet been found. He replied that they were working in that direction now, but could not give any information for the present, though he might say they had a very good hope of being successful. Several other questions framed to "draw" Dr. Rennie on this point were cleverly and good-humouredly parried.

At the close a hearty vote of thanks was accorded to Dr. Rennie, who, in replying, said: "A company of people who can sit through a whole sunny afternoon, and in a hall like this, and listen to a tedious discourse, can only be described as enthusiasts of the first order. I find that the kind of audience that never wearies is the bee-keeping audience. Addressing a scientific audience, I find it very restive long before two hours have passed. It is very gratifying to one, and gives great encouragement when one is working on the subject with so many eager followers, anxious to get results. It is to your eagerness and enthusiasm that is due in a considerable measure the persistence of the investigation with which I am associated. I admire very much your persistence and perseverance in trying to get information as to remedies. I might have given you something this afternoon, then somebody would try it, and if they did not get the desired result they would write to the bee papers and say: 'Dr. Rennie gave a remedy for Acarine disease, but I have tried it on my bees, and it is no good at all.' Well, I am not going to give you the opportunity. (Laughter and applause.) I hope one day to give the cure you are anticipating, but when it is given you may be certain it has been thoroughly tried and tested. That is the spirit in which, with the generous help of Mr. A. H. E. Wood, himself a first-class bee-keeper, I am conducting this research. I thank you for your kind attention and patience."

A Dorset Yarn.

"Creation's mildest charms are there combined."

After days of biting nor'-east winds bees are seen on the flowers. The sunshine of Saturday, March 25, sent them to the willows. The banks sheltered from the north were gay with primroses, celandine, and dandelion. A meadow of wild daffs. close to our bees did not take them from the willows. I know of no one plant at this time of the year that attracts them as do these. I like to see bees come out and fly off quickly; they fly off where "Creation's mildest charms are combined." The copse of alders and willows with hazel catkins freely intermixed is a happy hunting ground for them.

As I wrote some time back of woods and their charms, I need not go over it again, but bees do well in the woods. A relative of my wife lives in one of the lonely New Forest keeper's houses, miles from everywhere. They have got used to the forest; it is difficult to get them away from their home. It is so lonely that foxes will take the chickens in daylight, but only once, as the gun generally lays the fox out the next time it comes; but the bees must get all their stores from the trees. His cows got their food in the forest, as did his pigs. His wife did not mind the loneliness. When we were there in summer it was delightful, but they never mind the lonely time of winter; they found "Creation's mildest charms were there combined." They were happy in their forest home; they had to buy so little, their wants were so few; they loved the forest for its loneliness, there were all the beauties they wanted to see close to them; all the music they wanted with the birds, and the bells which they put on their cows, the pigs always came back, but the cows would go away sometimes.

We find that our strong lots of bees continue to rob out the weaker lots. "What a noise your bees are making; are they going to swarm?" This was Sunday, March 26, when back from church, but the bee-keeper knows the robbers' song too well; there is no mistake about their persistent hum after stolen stores. It is the same story with other bee-keepers; it must be due to the shortness of stores or to enforced idleness by the rough weather, but this happens with the most up-to-date bee-keepers. I have known a strong swarm rob out the hive from which it was cradled; I have known my lot begin drawing out cells on the tops of bars in March, when the great flood of willows are in bloom, but not one of them has yet shown this up to now. April 2, though my esteemed friend, Mr. J. Pike, on the next hill not half a mile away has one of his "blacks" building up to the glass strip on the top of bars. He has had just the same surroundings as myself, with one exception; he has a very large house of peaches in full bloom; growers always give cold peach houses all the air they can while in bloom; his bees are close to these peaches, so it must be this lot of peach blossom that has given his bees this extra food. It is interesting also that it should be the blacks. Many writers enlarge on the small amount of honey stored by Italians in brood chamber while the queen is laying eggs in great numbers; here is an instance of the blacks not wanting to retard their queen in her maternal duties, but start new cells for the extra flow of honey. Our peaches are only just opening; the greater part are closed up, but some are full out; these were all covered with snow when we saw them on Saturday morning, April 1; this all melted off them before noon, but no bees ventured out. Some of these trees are among the hives 10 to 12 ft. high; these thousands of flowers we always consider a great help to our bees. Mr. Pike's bees show that they will even give surplus. In Roots' "A.B.C." it is stated, "Sometimes a small surplus." We find that an early ripening one called "Amsden-Juene" is the most regular one to fruit out in the open; a nectarine called "Elruge" also fruits regularly. The almonds bloom much earlier than peaches, and are very pretty in the early months of the year. In Bournemouth the nurserymen growers have planted them liberally in the beautiful grounds in that area, no matter which way you go in the residential parts, these lovely flowers are in nearly all of them. Some years they fruit freely, but when this happens the trees do not make so much growth, but they always bloom in abundance. "Creation's mildest charms are there combined."

Many of our growers are now budding the beautiful pyrus on standard thorns. These have such a variety of colour, and all are visited by bees; they are mostly planted by the walls of houses for shelter and support; as standards they will bear their own heads of branches and blossom. Where one has plenty of money, and room to plant, these are beautiful units of the floral kingdom to have around one. When they get age and size there are so many flowers, and where the pollen is harvested as well as nectar then they are doubly valuable to bees. Almonds, peaches, and pyrus might be freely planted in the southern counties for bee flora; in the colder counties they must be sheltered from the cold north winds by belts of trees, and hedges of laurel, holly, yew or other bushes. A gentleman who lives in Bournemouth in the winter and at Thurso in Scotland in summer says that the same flora that is in the south is at Thurso as well. He infers that the Gulf Stream touches that part of Scotland from across the Atlantic. Again we have "Creation's mildest charms there combined."

—J. J. Kettle.

Jottings from Huntingdonshire

March came in like a lion and went out like a polar bear. Last year my first swarm had issued and been hived before this date—on March 31 to be exact. This year March left us with a night frost of eight degrees. The wind, persistently blowing north, has prevented much foraging on the part of the

bees, and although there is pabulum uninjured by the sequence of frosts, much nectar has been destroyed; therefore, I have started a little outdoor feeding, which, of course, must cease as soon as the late plum blossom bursts forth. At the moment the box trees are an easy favourite of the flowering trees, and the celandine among the wild flowers. This cold snap, accompanied so frequently by bitter winds, will not result in much harm within our apiary if proper precautions have been taken in adding additional covering; an extra newspaper quilt will do wonders. Those people who are sceptical about the warmth conserving properties of paper can test for themselves by placing a sheet of paper around a hot-water bottle and noting how much longer the heat is maintained than when a bottle is wrapped in a covering of sackcloth. I mention sackcloth, as I notice paper abjurers seem remarkably fond of old sacks. Whatever our fancy, let there be covering that is adequate, but do not leave the same amount of quilting when the thermometer rises to 50 or 60 deg.

From reports one receives one learns that disease is still not unknown in this country, although I believe its one-time virulence has passed. What we shall have to combat is foul brood, which I hear, with regret, is increasing rapidly in southern counties. One hopes this disease will be checked and dealt with carefully—it will not spread like Acarinus if it is skilfully scotched.

The advent of April always fills the true bee-keeper with great hopes, and perhaps, after all, the check the cold spell has given to Nature will ultimately be all in the bees' favour. Ash trees, the yggdrasil of the world of trees, are bespeaking a very different summer to that of last year; let the north wind pass, and we shall see great movement in field and hedgerow. The birds refuse to cease nesting, and many migrant species of the feathered world have come to tell us they believe that summer is near. So let us get on. *Studiis et rebus honestis.* — E. F. HEMMING, Steeple Gidding.

North Hampshire Notes.

EXTRACT FROM "THE COTTAGER'S MONTHLY VISITOR," JUNE, 1840.

Another Letter to Bee-Keepers.

MY DEAR FRIENDS,—In my last letter I told you five reasons why it is better to keep your bees in a double hive, such as I have described, than in a hive of the common sort. One of these reasons is that with a double hive you can take the honey *without killing the bees.* This I am now going to explain to you.

If you have put a good strong swarm into your flat-topped hive the bees will soon have filled it with comb and will then want more room. Now, in the common way, you would let them swarm again and thus relieve the parent stock by sending off the young brood to shift for themselves. But this weakens the stock too much, as bee-keepers are too well aware. *Weak stocks* are always unprofitable, for they are hardly able to gather enough even to feed themselves, and are, besides, liable to be robbed and destroyed by wasps or other enemies. Never forget that in bee-hives, as well as in human families, *union is strength.* Instead of letting the bees swarm out and out as much as they like, *keep them at home* and they will do you better service. Give them room enough at home and they will not want to emigrate. They only swarm because they breed and increase so fast that the hive can no longer hold them, and if you give them more room in their old house they will gladly occupy it instead of seeking a new settlement. Now this is the meaning of having a second hive to put on the top of the flat one: it is to prevent them swarming too much by giving them room enough to stay at home. Notice well the effect of this management.

In ten days or a fortnight after you have hived the swarm in the flat-topped hive you will find that they are preparing to swarm again. When you see this, take the corks out of the holes in the wooden top and put the other hive on it. All signs of swarming will disappear at once, and the bees will go up into the upper hive and set to work there immediately.

About the middle of August, or earlier if the swarm is strong and the season favourable, you will find the upper hive pretty well filled with honey. All that it contains is to be your share, but all that is in the lower hive must be left for the bees. In a good season you may get the upper hive filled twice over.

How to Take the Upper Hive.

For this purpose you will want two round pieces of tinplate, or zinc, about the same size as the wooden top of the hive.

When you see by the little window that the upper hive is full, proceed as follows: First, with a long knife, separate the combs from the wooden top, wherever the bees have fastened them to it. Then take one of the zinc plates and pass it very gently under the top hive, between it and the wooden top, taking care not to crush any of the bees. Take now the other zinc plate and pass that under also, so that the two plates may lie one upon the other. Thus the bees which are in the top hive will be shut up close prisoners, and those in the lower hive will be prevented from getting out at the holes when you take the upper hive away.

The best time to do this is about nine o'clock in the morning of a fine day, when the greatest number of bees are out. Having put in the zinc or tinplates as above described, let the hive stay in its place all day, leaving the bees shut up. About an hour before sunset lift off the upper hive with one of the zinc plates serving as a bottom to keep the bees from getting out. Carry it away carefully to the other side of the garden and set it on the ground. Then take a small stick and tap upon the hive smartly all round for about half an hour. This will frighten the bees and make them still more eager to escape from their long imprisonment than they were before. Turn the hive upside down and fix it in that position with two or three

bricks or stones and lift off the zinc plate. The bees will then, for the most part, fly home; but as some may perhaps still cling to their treasure, unwilling to leave it, it is as well to know how to get rid of them in this case. Carry the hive under cover for the night, set it bottom upwards and tie a coarse canvas cloth over it. In the morning you will find the bees all hanging together in a cluster from the cloth, so that you can without difficulty lift them all out of the hive. Take the cloth gently off, with the bees hanging to it, and spread it out upon the ground in the sun and you will soon see the bees fly home to the wooden-topped hive. Thus you will have a hive full of honey *without the loss of a single bee*, except you happen to crush one or two, which cannot always be helped; and besides this, there will be honey enough left in the lower hive to serve as a provision for the bees in the winter.

Next time I hope to tell you also how it is that you will thus get *better* honey and *more* of it than in the common way.—Your sincere friend, A BEE-KEEPER.

Extract forwarded by W. B. Corbett, Hurstbourne Tarrant, North Hampshire.

Lines from Lichfield.

Bee-keeping for the Young.—Correspondent No. 10,628, in discussing this subject is, to my mind, just a wee bit optimistic when he hopes to see bee-keeping taught in schools. I am inclined to think that if he inquired of the schoolmasters in his district what their opinion of the matter is they would inform him that the essential subjects at present taught are so numerous that to add even *our* pet hobby to the list is, at least, not desirable.

Two years ago I approached three headmasters of country schools, suggesting the formation of bee-keeping clubs, classes mixed or otherwise, offering my services free, all to no purpose. It would be interesting to learn the views of "D. M. M.," and a notable authority in this country, on the subject.

Hives for Novices.—The W.B.C. pattern is, without question, the most suitable, as manipulation is so much easier than with the single-chambered variety. The lateral movement which is so essential when removing surplus chambers, glass quilt, or super-clearer, cannot be made with the latter, and the result when the bees have joined the bottom of the frames to the top of those below by means of brace combs is, to say the least of it, painful! An upward movement of the top lot in such instances means lifting any of those below which happen to be connected to them, and the inevitable "wallop" when the separation takes place, together with the crushing of some of the bees, creates a liveliness of both bees and novice, and revives sweet childhood memories of prayers, long forgotten, leading to "strained relations."

Hive Roofs.—Now that the "fill dyke" month has acted up to its reputation, many bee-keepers will have been able to see whether the rain got through the roofs of their hives, and my experience of all forms of wood roofs, either painted or calico covered as well, is that one never feels absolutely certain that no leakage will occur, and the only covering that is effective, light and durable is "Asbestone," and can be described as IT, being light in colour and weight, easily cut to size when new, can be bored with a bradawl to fix on to the flat, sloping frame prepared for it with non-corrosive nails.

It is a non-conductor of heat or moisture, and needs neither putty nor paint, getting harder with age, and those who follow the questionable practice of putting bricks on their roofs of wood, etc., may do so with impunity in the case of "Asbestone," with no ill-effect. I have many hives covered with it, and every one is as dry as any "Pussy-foot" Yankee.—E. JACQUES.

Labelling Honey.

Your correspondent E. H. Tunmer (10,631) raises a very interesting point with regard to the labelling of honey, with its place of origin. He is quite right when he says that English honey can hold its own on its merits if given just a sporting chance. But how often does it get that sporting chance? Honeys of all sorts, colours and qualities are allowed to be exhibited in shops without any indication of origin, and the ordinary purchaser is left to believe that it is English. In fact, I myself have been told point-blank that it is English by a tradesman anxious to sell. Now, put this honey side by side with English produce and we fear no competition. But the mischief is done in a different way. I have often been told by friends and acquaintances that they do not like honey. I always follow up that statement, and ask when and where and how they tasted honey that they can make such a statement. Almost invariably I find that the only acquaintance they have had with honey has been acquired by purchasing at the grocer's or chemist's a jar of this foreign stuff, whose chief recommendation is its bright label.

Now, I always keep two sorts of honey by me—my own and a jar of cheap foreign honey, and when my customers come to buy they are treated to both sorts. Result, my own honey is sold, and they come for more.

I would now like to expose an absolute fraud being perpetrated upon the British public. I refer to the marking of foreign honey as English, or at least as British or even as "Heather."

During the last summer holidays in North Wales my wife called my attention to some honey jars in a tradesman's window. These were marked at 1s. 4d. the half pound, and labelled "Pure Heather." My interest was at once around by the word "Heather." I entered the shop and asked to be allowed to examine a jar. This permission was graciously accorded, and I will stake any reputation I have as a bee-keeper of over twenty

years' standing, and a producer of heather honey for sixteen years, that the honey was then nearer to the heather than it had ever been before. It was a cheap grade, of foreign origin, in my opinion. I am only sorry that I did not there and then buy a sample and have it tested. I am, however, looking out for another pot in this district, and then—well, things will begin to hum. And the label on the jar had the name of a well-known firm of packers upon it.

Some years ago, being in Manchester, I thought I would try to sell wholesale a little of my honey, of which I then had a large quantity by me. I asked a fair price, but little was doing in the way of sale. One tradesman, however, reaching down a jar, told me that that was the honey he sold, and asked my opinion upon it. I respectfully indicated that I would rather sell my own goods than criticise the production of other people. Being pressed, however, I gave my opinion as follows :—"This is a very cheap grade of foreign honey, produced possibly in the West Indies, and procurable at the docks in bulk at less than threepence per pound." My word! You should have seen the shock my questioner received. I thought I should there and then have been thrown outside, and had temporary visions of a policeman coming along to pick up the bits. How the man stormed and carried on, and asked if I meant to suggest that he was not selling English honey! Again I respectfully told him that he had asked for it, and had got it, and I could not help whether it suited him or not. To end a long story, however, it finished up in a friendly way. As I left the shop he said, "You are right, my friend, in what you say about the honey. It is exactly as you said."

Frankly, Mr. Editor, I don't know what I prove by this long rigmarole, except perhaps that English honey can still hold its own with those "who know." With those who don't know, one taste of this cheap foreign stuff destroys any desire they may have for honey, and makes them even chary of tasting the real stuff.

By all means let honey be marked with its country of origin. D. WILSON.

West Country Whispers.

The bee-keeper's busy time is fast approaching, and should mild weather continue it will be well to peep under the quilts and examine stores, and towards the end of March or early April stocks can be looked over; one is better able to tell then exactly how the stocks are as regards strength. It really is a pleasant sight to stand amongst one's hives and see the air full of bees, as they fly off and come home again laden with their golden harvest of pollen, which can now be gathered from the willow in abundance. It cheers the bee-keeper when he sees that his stocks have come through without loss. Orders should now be made up and sent off, without delay, if not already dispatched, for all necessaries for the coming year. If any stocks are found weak it would be far better to unite them with another colony and keep the younger queen. Spring-cleaning will soon be coming along, and I find that it is a good plan to take a new hive or one that has been well-cleaned during the winter, and lift the brood-chamber combs and bees out into it, and then the dirty hive can be cleaned; when the weather is warmer and it is safe to take out the combs one by one, the brood-chamber can then be changed, that is if the hives are of the W.B.C. type, with separate brood chambers. Each hive can be dealt with in rotation, as, for instance, if the bee-keeper has four new or clean hives to commence with, four stocks can be moved straight away, then when the four dirty hives have been well cleaned and opened to sun and air, four more stocks can be gone through in good time. I consider that if the hives are all left until the weather is suitable for taking the bees out on their combs one by one, it delays spring-cleaning so long that other work gets behind. I am thinking especially of the bee-keeper who keeps bees as a hobby and has other duties to perform during the day, so that if cleaning the hives and repainting, if necessary, is done early the brood chambers can be got through later. If stocks are found short of stores on examination, a little warm syrup in the evening could be given.

This would stimulate the bees wonderfully, and one would soon notice that the stock became more active. I hope that 1922 will be another good year for bee-keepers, as was 1921. Then one will be rewarded, not only with a pleasant hobby, but also with a rich harvest. — W. H. WOODSFORD, Chard, Somerset.

Devonshire Doings.

BY GEORGE ORD, B.Sc.

Since writing my last article for THE BRITISH BEE JOURNAL many inquiries have been made as to the number of bee-keepers in this part of South Devon and East Cornwall. It is gratifying to find so many. Some are old hands at the craft, but when "Isle of Wight" disease raged in this neighbourhood their stocks were swept out. Now, however, there is a marked rejuvenescence, and many are going in for bee-keeping.

It is sad to find the straw skep still in vogue in some out-of-the-way corners of the two counties. In these days of enlightenment it seems almost incredible that some people still resort to the barbarous method of killing their bees by sulphur fumes in order to get the honey. Such people deserve to be prosecuted for cruelty to animals.

To-day there was a contented hum of bees in every part of my garden. On investigation I found many on the violets, crocuses, arabis, scilla and aubretias. The bees were also busy getting propolis from the young shoots of the cypresses. The hum reminded one of that pleasant sound of bees in summer among the foliage and flowers of the lime trees. Never have I seen the hedges so lovely as they are at present, with

the thousands of pendulous catkins of the hazel and willow. The wind as it sweeps through the trees bears the pollen on to the red stigmas of the female flowers of the hazel and to the female catkins of the willow. The bees are coming home laden with pollen obtained principally from the gorse. A hillside near is a mass of golden-yellow flowers. Apparently breeding is going on very fast, judging from the amount of pollen taken in by the bees. To-day I peeped into the hive, and felt quite satisfied with its denizens. They have only had one pound of candy given to them and one pound of food made with powdered loaf sugar and honey. The stores of natural food are not used up. A fortnight ago the numerous bees flying about made one think they were swarming. Now and again I have found a dead bee on the alighting board, and after microscopical investigation for the bee parasite (*Strepsiphera*) have failed to discover the latter. Nor have I been successful in detecting *Branla caeca*, or blind louse, another parasite which attacks the bee. I should be grateful if any reader would send me specimens of bees troubled with these latter, being desirous to do some research work on them. In my garden there have been all through the summer, autumn and winter thousands of the Snow Fly (*Aleyrodes proletella*) on the cabbage plants. They are scale insects, and must produce a lot of honeydew, which I believe is harmful to the bees. Is it not? There has been quite a plague of these flies in this part of the country.

The Song of the Bee.

Speeding through the golden sunshine, the fairies of the hive occupy the days in happy work. How their silver wings flash as they dart along the aerial highways, while the music of their hum fills all the space with harmony. Buzz! Spring is come. Make haste to profit by her bounty; fill up the waxen store-room with the treasures from the flowers. Higher and higher rises the note as the day advances. Haste, sisters, haste. Time is flying, and soon the great day of swarming will be here. Haste, for our city must be fully stored before we set out on the great adventure. Work on, ye nurses. Feed and tend the mighty nurseries that the young citizens may grow strong and fit to carry on our work. Midday, and the nurses come out to take exercise, and now the sound is like a deep, sustained organ note, and still the song is work. Haste, for the good of our city and the carrying on of the species. Work without ceasing, for our time is short, and all must be done before we can go. Rest will come with winter. Low drops the sun, and still the work continues, and now the note is lower, but still with the same refrain, work. Night, and now a murmur only, which continues until morning. Work, sisters, work. Fan, turn the stores, feed the young, and all the countless tasks of the home. Haste, for the time is short, and the night of our rest draws nigh.—G. J. FLASHMAN.

Week-End Bee-Keeping.

(By S. H. SMITH, Cambridge.)

(*Continued from page* 145.)

I do not suppose, D. B., that you will need to be shown more than once how to move and act when doing any manipulations with bees, but it is just as well that we should start right. Let us go to the honey-house and gather together the necessary tools and appliances. Put on your overalls and adjust your bee-veil on your hat, so that you can pull it down quickly when needed.

Now we will load up the wheelbarrow and check over the various items. Nothing is quite so foolish as the unnecessary running about one notices when visiting some apiaries. One otherwise good bee-keeper of my acquaintance averages four trips from hive to honey-house every time he opens a stock. The Americans call such doings "lost motions."

The only tools we need take with us are the usual ones—smoker and fuel, hive tool and sprayer—but we shall need that small level and an extra brood-chamber, and those quilts. Because mice often gnaw matches, and so start fires, we keep the matchbox in an old tobacco tin.

I find tinder—punk, or rotten wood, the best material for smoking bees, but I can get it for nothing out of the decaying willows in the hedgerows. You apply the flame at one end, and place the smouldering part downwards into the smoker. Please take the tools, and I will push the barrow.

We must now carry those three newly-painted W.B.C. hives, and place them beside those six bee stocks. We can only carry one hive at a time on the barrow. Where are the rest of them? Right where they stand—the old hives, you know. You can't expect a "new poor" to have a complete duplicate outfit. No, dear Mr. D. B., as we go along we shall remove the old hives, clean, scrub and repaint them one by one, and use them when ready. It will mean work, some perspiration maybe, but it will save capital.

Before we start, let us go through the movements usually employed when opening and manipulating a bee stock. It will pay to practise and memorise them, so we will imagine this hive represents a bee stock. There is a clean brood-chamber in it, with ten empty drawn-out combs. In order to save time and labour, we are going to spring-clean and to double those six bee stocks at the same time. They are ready because I have been feeding them for this very purpose, and they were set apart last autumn for this very end. Each one contains a fine, selected Italian queen bee.

Movement No. 1: Puff a little smoke in at the entrance and under the top quilt.

Movement No. 2: Lift the whole hive forward about one yard.

Movement No. 3 : Place the clean hive on the bricks the old one occupied. Test with the level the clean floorboard, and place the clean brood-chamber.

Movement No. 4 : Open the old hive, spray with "Flavine," examine each comb carefully, look for the queen.

Movement No. 5 : Select two combs with brood, and place them in the centre of the second clean brood-chamber. Put all the other combs into the clean brood-chamber, on the clean floorboard, retaining as far as possible the same sequence the combs had in the old hive. Insert on each side one of the two drawn-out combs taken from the second clean brood-chamber. Place the second brood chamber on top of the first, put on a clean calico quilt, adjust the thick quilts. Close the hive and reduce the entrance to two inches.

Movement No. 6 : Shake off all adhering bees from the old brood-chamber, lifts, floorboard, etc., and remove these to some distance away. Scour and scrub them with hot water and soft soap, and leave them to dry in the sun and air. Repair and paint the hive.

I believe, D.B., you took a course of those much-advertised mnemonics, and you should be able to memorise those six movements easily. Kindly repeat the formulæ. Wonderful! Wonderful!

Now for signals. When we are working at the hives I shall not be able to explain things fully. We must not let brood get chilled by dawdling. So when I say "Eggs!" please look for eggs and nothing else. The same will apply when I say "Brood!" "Pollen!" "Drone Cells!" "Queen!" "Queen Cells!" "Emergency Brood!" or whatever else I want you to note. From your reading you will have a very good idea of what to expect, so there should be little fumbling about that part.

Ah! I am glad to hear you have confined your reading to the British Bee-keepers' Guide Book. Wait until you have mastered the fundamentals before reading widely, or you will get badly confused. Ready? Off we go.

Hive No. 1 : Now I will take the lead, and you will watch and help. Off with the roof! Let us peep under the quilts. Boiling over! Movement No. 1 : A few gentle puffs to drive in the guards. They are the ones that cause trouble. Another puff or two under the quilts. Now No. 2 : Right. No. 3 : Correct. No. 4 : Stand by with the sprayer. A gentle damping down of their wings prevents the bees from flying, and may save us time and the loss of a cash asset by preventing the queen from taking a flight. Yes, that happens occasionally. Things do not go by clockwork in an apiary.

We prise loose the first comb with this nickle-plated hive tool. If dropped on the grass it is easy to find.

The extraction of the first comb is the only difficult task about the opening up of a bee stock. Still a little, old sealed honey in this outside comb. We place it sideways against the side of the alighting-board.

(To be continued.)

Conveyance of Honey by Passenger Train.

The following letter, which the Rev. K. O'Neill has kindly sent on to us, will be of interest :—

Railway Clearing House,
Seymour Street, Euston Square,
London, N.W.1., March 10, 1922.

DEAR SIR,—Your letter of December 16 last has been considered by the railway companies in conference, and I have pleasure in informing you that on and from April 1 next honey in tins, etc., when conveyed by passenger train, will be charged as follows :—

Company's Risk.—General parcels scale, including collection and delivery within the usual limits at stations where arrangements for these services are in operation.

Owner's Risk.—Owner's risk scale of rates, including delivery within the usual limits at stations where arrangements for this service are in operation.

If not properly packed, the traffic will be carried at owner's risk only, and it will not be insured. When the traffic is conveyed at owner's risk the appropriate form of owner's risk consignment note must be signed.

With regard to your application for consignments comprising two or more parcels or packages of honey when sent from one consignor to the same consignee by the same train to be charged on the gross weight of the consignment, I have to inform you that the companies regret they cannot see their way to accede thereto.

Yours truly,
P. H. PRICE.

Kildare O'Neill, Esq., the Rectory Apiary, Eaton Bishop, Hereford

Acarine Disease : Examination of Bees.

The Ministry of Agriculture and Fisheries wishes to inform bee-keepers that bees can now be examined for the presence of acarine disease on payment of a fee of 2s. for each sample submitted. The following instructions should be carefully observed :—

(1) Specimens should be *live* bees of about 30 in number, taken from off the combs, and not collected from outside the hive. It is in this way only that the true condition of the colony can be diagnosed. *Dead* bees will not be accepted, as they are unreliable for microscopic examination.

(2) The bees should be placed in a small cage or box, preferably of wood, provided with ventilation holes and having a piece of muslin fastened across the inside for the bees to cling to during transit.

(3) A supply of candy sufficient to last for a few days, or a lump of sugar moistened with water, should be wrapped in muslin and firmly fixed to the inside of the box.

(4) The box should be secured with string, and a label attached addressed to the Secretary, Ministry of Agriculture and Fisheries, 4, Whitehall Place, S.W.1, with the name and address of the sender written on the reverse

side, but crossed through to prevent an error in the post.

(5) Not more than three samples may be submitted by a bee-keeper at any one time, but further samples may be sent at intervals of four days. In all cases where more than one sample is sent at a time these should be numbered 1, 2, and 3, as the case may be.

(6) At the same time as the bees are despatched a remittance at the rate of 2s. for each sample submitted should be forwarded under separate cover. No bees will be examined unless or until this remittance has been received. Payment should be made by cheque or postal order payable to the order of the Ministry of Agriculture and Fisheries, and not to any individual by name, and crossed "Bank of England." Postage stamps will not be accepted. The Ministry will not be responsible for any loss occasioned by inattention to these instructions.

(7) In the letter forwarding the remittance as much information as possible should be given with regard to the past history and present condition of the stocks from which the bees were taken. This may help the Ministry in giving advice when furnishing a report of the examination, and will assist in general bee-disease research

A Wide Re-Awakening.

My article to THE BEE-KEEPERS' JOURNAL of March 16 has brought me a large number of interesting letters from many parts of the country, all of which testify to a satisfactory re-awakening to the serious and complicated problem of securing the advantageous marketing of "English" honey.

As I cannot reply to all these correspondents individually, may I avail myself of your courtesy in drawing their attention to the exhaustive annual report of the Apis Club appearing in the March *Bee World* (pp. 249-253)? Any live bee-keeper will not think twice about spending a few pence in trying to study the many public questions discussed in that report. These questions are for the consideration and action of the forthcoming conference at Reading on April 8. *The craft of bee-keeping in practice is surely a wide partnership, and its advance or retreat is bound to react on all of us.* It is not enough to study our difficulties without learning to *act*. The Rev. E. J. Bartleet (hon. sec. to the Gloucestershire B.K.A.) rightly emphasised in your columns that bee-keepers should respect their motto, "Each for All" if they mean to advance. I should like to add that this motto is equally applicable to societies as it is to individuals, and any society which does not avail itself of the opportunities for co-operation and federation with others has but itself to thank for its degeneration. Let us, therefore, fully wake up to this splendid opportunity for considering some effective means for remedying our troubles. The governors of the Apis Club have spared no pains to ensure that the forthcoming conference will be of real benefit to bee-keepers if they will but rise to their opportunity. The club has the association of almost every leading society in Britain, apart from foreign societies. All the home societies should play their proper *rôle*, and send competent representatives to voice their views, and to take part in electing the proposed deputation to the Board of Trade. Those distant organisations who are unable to send representatives should at least send appropriate resolutions to the conference. Individual bee-keepers in similar circumstances would strengthen the conference morally by sending brief letters of support, but nothing short of massive and influential attendance can effect much, and it is up to us all to show our appreciation to the club in its unselfish public aims by more than lip service.

British bee-keepers for long have been divided into factions. The inauguration of the Apis Club three years ago in the midst of such turmoil was indeed a courageous step; and for the better spirit of amity alone, which it has been spreading, it has more than justified its creation, and has won the gratitude of all sober-minded British bee-keepers. As the membership of this Institute (both direct and otherwise) extends to many countries abroad, and since the club possesses the confidence of all its members, it is eminently suited for tackling the honey-marketing problem in a fair spirit. May success crown the deliberations of its conference, and may this event prove to be the signal for a wider re-awakening!

L. S. HARKER.

Surgical Treatment of a Queen Bee.

In our issue of December, 1919, we mentioned an instance of an egg-bound queen being restored to normal condition by Mr. F. T. Pollard by dipping it in neatsfoot oil. We now have to report the removal of the accidentally-inflicted deformity of a queen by means of surgical treatment. For some years past we have been marking queens by cutting square the extreme tips of the upper wings, this marking them for life without depriving them of the power of flight. It is a rather delicate operation to cut off only just enough to plainly mark the queen. While thus engaged, two months ago, we suddenly received a sting on one of the fingers operating the scissors, causing a jerk of the latter, which inflicted an ugly dent in the abdomen of the queen. We thought the queen was doomed, but, not having one handy to replace her, we let her go back into the hive.

A month later the disfigurement still remained, and there was very little brood, scattered irregularly in the comb. We were just about to kill this queen, but, experimentally applied pressure with forefinger and thumb to both sides of the abdomen, when suddenly the dented part sprang back into the original position. As the queen now looked quite normal we left her in the hive; and now, another month later, find that she is quite as active and as good a layer as any other queen.—From the *Victorian Bee Journal*, December, 1921.

British Bee-Keepers' Association.

ANNUAL MEETING.

The annual general meeting and conversazione were held at Pritchard's Restaurant, 79, Oxford Street, London, W., on March 16, 1922. There was a good attendance. The chair was taken by Mr. T. W. Cowan.

The minutes of the last annual general meeting were read and confirmed.

Many letters expressing regret at inability to attend were received from members of the Association.

The Chairman moved that the annual report and balance-sheet for 1921, as printed and circulated, be adopted. This was carried unanimously.

Mr. W. Herrod-Hempsall proposed, and Mr. G. Waldock seconded, a hearty vote of thanks to the retiring Council and Officers. Carried unanimously.

Mr. W. F. Reid proposed, and Mr. C. L. M. Eales seconded, the election of vice-presidents, hon. members, and corresponding members, hon. treasurer, auditor, and solicitor for the year 1922, as printed in the report. Carried unanimously.

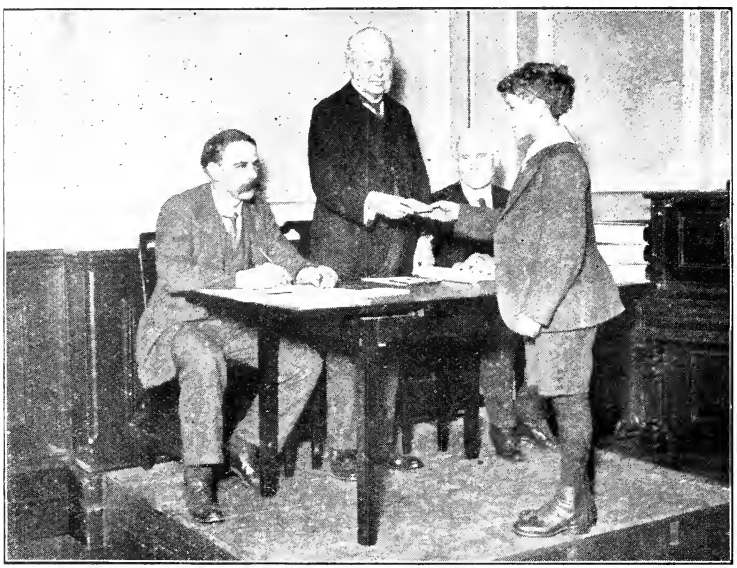
Mr. Cowan proposed, and Mr. C. L. M. Eales seconded, and it was carried, that Monsieur J. Denuler, Enghein, Alsace, France, be elected an hon. member.

Mr. G. Waldock proposed, and Mr. E. H. Pankhurst seconded, and it was carried, that the following be elected on the Council for 1922: G. R. Alder, G. Bryden, C. L. M. Eales, A. L. C. Fell, G. J. Flashman, F. W. Harper, J. Herrod-Hempsall, Miss M. Whyte-Johnstone, J, B. Lamb E. D. Lowes, W. E. Moss, A. Richards, W. F. Reid, Miss M. D. Sillar, Sir Ernest Spencer, W. H. Simms, E. Walker, and F. W. Watts.

Mr. Reid proposed, Mr. Eales seconded, and it was carried unanimously, that the Master of The Worshipful Company of Wax Chandlers instead of being President of the Association be raised to Patron.

Mr. Reid said it was with great pleasure, which he was sure would be shared by every member of the Association, that he proposed as President Mr. T. W. Cowan. (Applause.) Mr. Cowan was the oldest member of the Council, and he had done more for bee-keeping than any one else. He commenced his activities on the Council in 1874, forty-eight years ago, and had continued them ever since. He had been Chairman of Council for a long, long period, and it was fitting that they now honoured him by electing him President. The election was carried with acclamation.

Mr. Cowan, in replying, said he had come with the idea of resigning from office, as he was now in his 83rd year, and could not take part in the active work as he had done in years gone by. He was delighted to be amongst them once again. He was doubtful as to whether he could stand the long jour-

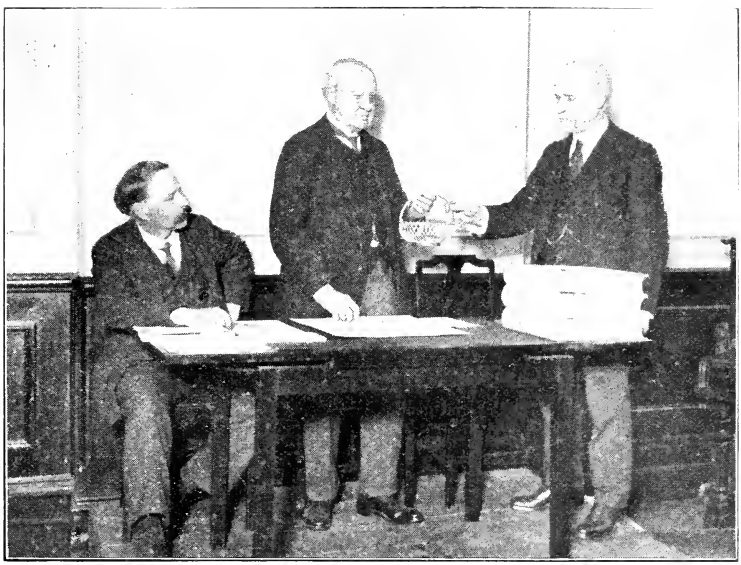


MR. T. W. COWAN PRESENTING MEDALS TO MAURICE HERROD-HEMPSALL.

ney to town, but Mrs. Cowan urged him to be present, so he had made the effort. He appreciated very much the honour bestowed upon him, which he had no idea was contemplated, and as the request was spontaneous and had been received so enthusiastically he could not do otherwise than accept. (Long and loud applause.)

A discussion then took place with regard to the labelling of honey other than that produced in Great Britain. It was eventually resolved that the Board of Trade be asked to make it compulsory to label honey exposed for sale with the country of origin.

An adjournment was then made for tea,



Mr. W. F. Reid Presenting the Testimonial, etc., to Mr. Cowan.

to which about 80 members and friends sat down.

After tea Mr. Cowan presented the W. Broughton Carr Memorial Gold Medal, the Silver and Bronze Medal of the B.B.K.A., and the Preliminary Certificate of Examination to Master Maurice Herrod-Hempsall. Mr. Cowan said he had great pleasure in presenting these medals and certificates to the youngest member of the Association who had ever received them, being only ten years old; it was highly creditable to him, and showed the intelligent interest he had taken in the subject, and hoped he would continue to persevere, follow in his father's footsteps, and ultimately become as prominent and as highly respected a man in the bee world as he was.

Mr. Reid then rose and said: "It is my pleasant duty, Mr. Cowan, to present to you on behalf of the British Bee-Keepers' Association, and of a large number of other bee-keepers, this testimonial, which expresses our admiration and gratitude for the services you have rendered to British bee-keepers in the following terms:—

"British Bee-Keepers' Association.

To Thomas William Cowan, Esq., F.L.S., F.G.S., F.R.M.S.

"On this, the 47th annual general meeting of the members of the British Bee-Keepers' Association, the Council desire to present to you an expression of the affectionate regard in which you are held, not only by members of this and the affiliated Associations, but also by bee-keepers generally throughout the British Isles. They also wish to place on record their deep appreciation of the value of the services which you have rendered to the bee-keeping industry, both in your capacity as Chairman of the British Bee-Keepers' Association and by your numerous writings on apiculture.

"The progress made by the parent Association under your able chairmanship, which has lasted for 48 years, has been most gratifying. When you accepted the office in 1874 there was no local bee-keeping Association affiliated to the British Bee-Keepers' Association, whereas at the present time the number of such affiliated Associations is 48.

"The subscribers to this testimonial express the earnest hope that you will continue your

useful activity for many years, and they ask Mrs. Cowan's acceptance of the gift which accompanies this expression of their appreciation of your valued services."

The address, which was beautifully illuminated, and signed on behalf of the Council by the President, Vice-Chairman, Hon. Treasurer and Hon. Secretary, was then handed to Mr. Cowan amidst loud applause.

Mr. Reid, proceeding, said: "I am also asked to offer for your acceptance these books, the three volumes of 'The Mammals of Great Britain,' by J. G. Millais. Your own books have afforded pleasure and instruction to many thousands, and we trust that now, in your well-earned leisure, you also may derive satisfaction from the perusal of the work of a true lover of Nature and a great artist. (Great applause.)

"While you have devoted so much time to assisting others and to the work of our Association, we are not unmindful of the fact that we have to some extent deprived Mrs. Cowan of your society. As a slight token of our recognition of this fact, and of our esteem and high regard, may we offer for her acceptance this silver fruit basket? The ancient Greeks had a pretty story about the golden apples of the Hesperides which endowed those who ate them with eternal youth and health. May we hope that this basket will always be full of the excellent fruit of the beautiful county in which you reside, and that there may be among them some of those golden apples to which I have referred, ensuring to Mrs. Cowan and yourself that long-continued health and happiness which we all wish you may enjoy?"

After the applause, which lasted some minutes, had subsided, Mr. Cowan, in response, said: "Mr. Reid, ladies and gentlemen,—The presentation of this address and the valuable books, together with the silver fruit basket for Mrs. Cowan, is such a surprise to me that I am afraid I am incapable of expressing my thanks in language adequate to the occasion or to what I feel. I am grateful that you have not forgotten Mrs. Cowan. I am sorry she is not present with me to personally share the honour. For 58 years she has not missed being present with me on similar occasions, and I regret that her health has made this the first occasion on which I have not her company.

"I was very much afraid that I should not be able to come, but Mrs. Cowan said, 'Do go and be with them once more if you can'; therefore, as it was her wish, I came.

"I feel greatly honoured, not only by the presentation you have made to us, but also at being elected your President.

"It was in 1874 that I first became connected with the work of the Association, although I had kept bees long before that time. When I first commenced bee-keeping few used movable comb hives; the majority of bee-keepers kept their bees in skeps and destroyed the bees to take the honey. Those who kept them in a humane manner and in frame hives could be numbered on the fingers of one's hands. I had read about bees in the articles by Mr. Woodbury in the *Cottage Gardener* and Mr. Abbott's in the *English Mechanic*, which created sufficient interest in the correspondence to induce Mr. Abbott, in 1873, to start the *British Bee Journal*, the first paper entirely devoted to apiculture, the first volume of which consisted of 199 pages, while the last contains 616 pages, and shows the progress made in the 49 years of its existence. I started bee-keeping as a hobby and to learn something about the life of the bee, but was not long in finding that if intelligently managed a profit could be derived from bees.

(*To be continued.*)

Bucks County Bee-Keepers' Association.

ANNUAL MEETING.

The annual general meeting of the above Association was held at the Congregational Schools, High Street, Aylesbury, on Saturday, March 18, 1922. In the absence of the President (Mr. Winterton), Mr. C. G. Watkins was voted to the chair. In his opening remarks he stated that the membership is 316 and that there had been a good honey season; one member in particular had 280 lbs. of extracted honey from one stock, and took two prizes with it. He further stated that prizes were to be given to members at the High Wycombe Horticultural Show and the Bletchley Horticultural Show, and that there would be exhibits of honey at the annual show of the Royal and Central Bucks Agricultural Association, open to the county, with additional prizes for members. The new honey labels were criticised, and it was contended that the words "guaranteed English" should be added. It was pointed out that the name of the Association was on the label and that the labels issued to each member bore a distinctive number, and that complaints were to be addressed to the hon. secretary. The matter was referred to a sub-committee for their consideration. The report and accounts were then adopted. Capt. G. Bowyer, M.P., M.C., was elected president in the place of the retiring president, who was cordially thanked for his services. Mr. R. G. Meadowes was elected to the committee in the place of Professor Farmer, and the remaining members of the committee and the other officers were re-elected.

The Editor of the *Bee World*, Dr. Abushady, then opened a discussion on "Bee-keeping as a Rural Industry." He advocated the education of rational bee-keeping, and in order to attain this the essential factors were the bee-keeping organisations, the Press, individual bee-keepers, and the Government. After paying a tribute to the progressiveness of the Bucks County B.K.A., he argued that bee-keeping organisations should co-operate on the simplification and the standardisation of appliances, the breeding of better bees, the forced labelling of imported honey, with the country of origin, and co-operative marketing of the home-produced article. He pressed for harmony in the Press and co-operation between bee-keeping societies and the Press, and that individual bee-keepers should not

be inactive, but should influence the committees of their societies and through them the Press and the Government, and that without co-operation there could be no real progress. If they did this, and were active in their demands, the Government would take more notice of them. A large number of the members present continued the discussion, and it was finally moved and seconded, and unanimously carried that (1) it was desirable that hives be standardised, and (2) that honey be labelled with the country of origin The meeting concluded with a vote of thanks to Dr. Abushady and the chairman.

(*Communicated.*)

Cambridge and District Bee-keepers' Association.

ANNUAL MEETING.

The annual general meeting of Cambridge and District Bee-Keepers' Association was held at the Livingstone Hotel on Saturday, March 18, 1922, when a representative number attended, Dr. C. G. L. Wolf being in the chair. Before proceeding with the business a letter from Sir Douglas Newton was read intimating his desire to be present if at all possible. The report and accounts for 1921 were received and adopted. In proposing the re-election of Sir Douglas Newton, K.B.E., M.P., as President, the Chairman paid a glowing tribute to the help afforded by Sir Douglas Newton in the past, and now his presence in the House of Commons would be of inestimable value to bee-keepers generally. The proposal was received with applause and carried unanimously. The following officers were elected: — Vice-Presidents: Mrs. Gordon, J. Chivers, Esq., Sir H. Darwin, F.R.S., H. G. Few, Esq., C.C., F. R. Ford, Esq., Prof. J. S. Gardiner, F.R.S., R. B. Jenyns, Esq., C. J. Mapey, Esq., C.C., Rt. Hon. E. S. Montagu, M.P., J. C. Denison Pender, Esq., M.P., Sir A. E. Shipley, F.R.S., S. H. Smith, Esq., Ralph Starr, Esq., and Dr. C. G. L. Wolf.

Executive Committee: (Chairman) C. F. Clay, Esq., (Vice-Chairman) C. J. Mapey, Esq., Miss Sharpley, Rev. W. Ellison, Messrs. G. W. Bullamore, F. R. Ford, W. J. Halford, W. Mosley, P. J. North, G. E. Rogers, F. Rowe, A. A. Symonds, G. Thomas, with R. H. Adie, Esq., C.C., and H. F. Beales, Esq., C.C., to represent the C.C. Agricultural Education Sub-Committee. Treasurer: C. J. Mapey, Esq. Hon. Secretary: Mr. E. C. R. Holloway.

A unanimous vote of thanks was passed to Mr. G. W. Bullamore, who, in his capacity as expert, has been of great assistance to the Association, and who has freely given his services in the interests of good bee-keeping. A similar vote was also proposed to the Hon. Secretary by Dr. Wolf, who said he did not suppose there was a more efficient, more willing, devoted and genial secretary than theirs. They were most fortunate, and it was a very great pleasure to propose the vote of thanks to Mr. Holloway for his most valuable services to the Association.

It was announced that arrangements in connection with the Royal Show (Honey Section) were well in hand, and volunteers to act as stewards were asked to advise the Secretary.

Mr. G. Thomas was persistent in his request for a wax trophy to be included in the Royal schedule, and after a lengthy discussion it was eventually decided to recommend the matter to the Committee for their consideration.

The question of labelling imported honey as such was discussed, and this also was left to the Committee to frame a resolution to be forwarded to the Board of Trade.

It was suggested that a conference of bee-keepers should be held in Cambridge during the Royal Show week to discuss various questions of vital interest to the craft generally. —(*Communicated.*)

Glamorgan Bee-keepers' Association.

ANNUAL MEETING.

The annual meeting—the forty-third—of the above Association was held at Swansea on Saturday, the 25th ult. The chairmanship was undertaken by W. J. Percy Player, Esq. The meeting being held at Swansea gave an opportunity to those enthusiasts who live in the western portion of the county to meet some of the eastern contingent, and compare notes and experiences. The Chairman, in the course of some interesting remarks, related some amusing experiences he had had with bees—himself being armed with a substantial pair of gloves and a thick veil. He initiated an interesting discussion on the raising of "Utility Bees"—bees which could produce the greatest return of honey. Farmers aimed at a high yield of milk, and poultry-keepers for great numbers of eggs per hen. It was pointed out, however, that cows and poultry could be specially fed, and their mating controlled, whereas bees foraged for their own food, and mating was not easily controlled. Also seasons had great influence on honey return.

Mr. Percy Player also spoke in appreciative terms of the work of the Glamorgan Bee-Keepers' Association as an advisory and propagandist body, and in analysing the report referred to the increase of work in this direction during the past year. The registered product in honey during the past year which is well within the actual was 17,333 lbs., which put at its lowest price came to about £1,300. As it is known there are many extensive districts still bearing, but a sparse bee population, this output could be largely added to, and one of the objects of the Association is to secure this increase.

The Treasurer was pleased to report a strong financial position, and gratification was expressed at the continued help rendered and facilities granted by the County Council.

The largest yield of honey reported from one hive was 280 lbs. The premier prize for light honey was secured at the Grocers' Exhibition by one of our members.

CHAS. F. DAVIES, Hon. Sec.

5, Borstal Avenue, Cardiff.

Northumberland Bee-Keepers' Association.

ANNUAL MEETING.

The committee, in submitting their report, fear that the year 1921 must be written down as disappointing.

Season.—The long drought curtailed and spoilt the clover-flow to a great extent in most places, and there does not seem to have been a long heather-flow, either. As no local secretaries and very few members sent in reports, the committee are unable to give any details.

That we have still to report disease is another disappointment, but the greatest is the apparent lack of interest in and support of the work of the Association by its members.

Disease.—This is still with us, and there were many losses. In some cases drastic treatment with "Bacterol," "Flavine," "Vadil," or other remedies appears to have saved some stocks, and tends to show that if a "suspected stock" is taken in time there is hope, but if neglected till 50 per cent. of the bees are affected there is none of saving that particular stock.

Association Apiary.—The programme agreed on at the last annual meeting was carried out. Mr. J. B. Ballantyne, Hazelbank, Lanark, was engaged as expert. The stocks were moved from Wooler to The Havens, Alnwick, on May 4. The apiary was soon established and in good working order. The weather conditions for queen-mating were good, but, unfortunately, the members failed to support their own Association, and when the nuclei were ready and in some cases sent out the bulk of them were refused or returned.

Members seem to have forgotten the rule that if a nucleus was not supplied one year the member concerned would have his name carried forward. It was through no fault of the Association that members were not supplied in 1920, but when the Association was in a position to supply and ready to fill all possible orders in 1921, it was hard to find members ignoring their own apiary. It simply meant waste of time and money on having an Association apiary at all. The loss on sales accounts for most of the drop in our balance.

After the queen-rearing season was over, Mr. Ballantyne went on tour. He visited members and non-members alike, and made certain suggestions for working districts that are worth considering. After his tour he returned to Alnwick and saw to the apiary being properly packed down for winter.

It has been decided that the county be divided into three districts, the North, the Morpeth, and the Tyneside. North: Mr. Mills, Gas Works, Wooler, secretary. Morpeth: Mr. Embleton, 46, Newgate Street, secretary. Tyneside: Major C. O. Gibson, Bywell Castle, Stocksfield.

It was also decided that the Association apiary be sold; price to members, £5 10s. per hive. Members are invited to send in applications to the secretary of their district at once.

F. SITWELL, Hon. Sec.

CORRESPONDENCE

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real name and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

Legislation v. Education.

[10642] Far be it from me to be intentionally rude to that prince of bee-keepers, Isaac Hopkins. Allow me to at once withdraw any expressions of mine that Mr. Hopkins thinks objectionable. I have long admired the splendid work he has done for bee-keepers and bee-keeping in New Zealand, and I would be very sorry indeed if any words of mine should be taken in a derogatory personal sense by Mr. Hopkins.

Like Mr. Hopkins, I hope I have not made "too many mistakes" in dealing with the "appalling disease situation in New Zealand." In point of fact, I think I have not made any. In any case, let us, if we must differ, conduct ourselves so that we can shake hands after our positions have been frankly and strongly disputed over.

R. WHYTE.

A Serious Problem.

[10643] Referring to Mr. Harker's letter in your issue of the 16th ult. (p. 121), I also am convinced that there are two problems of greater moment than that of bee disease facing bee-keepers of to-day, both of which Mr. Harker mentions in his letter.

My business brings me into contact with retail chemists, and I know of many instances where a man has lost a steady sale of English honey through competition with the imported article, not by reason of the difference in price, *but owing to the effect which the imported article is having on the public taste.*

Bee-keepers must insist that all honey is labelled with the country of origin. The remedy does not lie in protection by means of a tariff. By all means let any food enter the country free. We ask only for fair treatment so that the public should understand what it is they are buying. English bee-keepers can well afford to stand by that test.

As regards the marketing of honey, the big producer will admit that there is often a real difficulty in selling his produce at a fair price. A system of co-operative marketing is of great importance, and will have to be faced sooner or later.

I saw extracted honey (English) marked at 3s. 6d. in the Midlands last December. This month it is down to 2s. 11d., and still a very slow sale. We need to ask a fair price from the consumer, not to almost kill him with shock before he has the chance to

taste the difference between the English and the imported article.

On the other hand, the wholesaler appears to judge all honey alike. One firm I know pays 1s. 2d. per lb. for fine English honey, re-selling it at 1s. 7d., the retailer charging 2s. 6d., and enjoying a very slow sale.

These two questions need discussing, and I hope bee-keepers will not miss the grand opportunity given during the conference of members of the Apis Club, which is being held at University College, Reading, on April 8, which is open to all bee-keepers.

The question of disease is well left in expert hands. These two questions are for the rank and file to answer. Those of us who realise the possibilities of honey production in this country trust that the answers will be given at Reading.—DUDLEY FIELDEN.

Mr. Berry's Hive.

[10644] In reply to Mr. D. J. Hemming (p. 69), the hive was a combination, with 13 standard frames of comb in bottom for breeding, with excluder over these, then another 13 standards on top for extracting. When putting these 13 on I took four combs with honey from bottom, replacing these with four full sheets of foundation. On top of these I had two small hives, each with six standards side by side, on top of the 13; also two small hives with six shallows in each. When extracting from these small hives I interchanged the combs, putting the empty ones as low down as I could and the most ripe at the top ready for extracting. When these small hives were off the hive, taking off what was ready of the 13 combs for extracting and having the others on top. My whole aim was to have plenty of empty combs as near the brood chamber as possible and all the ripest honey at top; also I had a row of 2lb. sections.

The queen was in her second year, reared by myself in 1920.

The source of honey was mixed—fruit, hawthorn and a little sycamore—and was of medium colour, very thick and very good flavour.

In reply to Mr. W. Hawkins' letter (10637), by one hive I mean a stock with only one queen.—JNO. BERRY.

Weight of Honey from One Hive.

[10645] Your remark as regards the amount of honey taken in a season being rather a query, I give you the following:—In 1915 I bought two colonies, with their hives, from a man who joined up. One was of an oblong shape, and eventually took twelve brood combs. From this colony I took 80 lbs. before going north, and I put four more lifts under those remaining. Some time after my return, besides the surplus above the brood chamber, under the advice of our county expert, I took away some of those brood combs that were full of sealed honey.

The total weight from this colony was 337 lbs. The amount was mentioned at one of our association meetings, and from what you say it evidently was—so far as one knows—the record until recently. So much for blacks. But is it a question of colour? I think not. Such experience as I have had with bees, e.g., our fen bees, as well as the Italians, goes to suggest to me that unless you regularly introduce into your apiary the particular strain that you fancy, your bees will revert as to colour to the particular and suitable colour for your district.

I have found that Italians where there were no other bees—for, say, two miles at least—revert to very fine blacks, in particular as to the drones, though the workers kept their colour better. Inquiry from other apiarists leads me to think that many will agree with me that in introducing new blood into our apiaries we should seek to improve those qualities *in which our particular apiary is weak*, and not confine ourselves to queens from one source.

This should be in a measure part of the work of our association experts, who should advise bee-keepers as to the new strain advisable in their particular case.—KILDARE O'NEILL.

Labelling Honey.

[10646] I notice a letter *re* honey labelling in this week's "B.B.J." My method is as follows:—Blended, or one-kind foreign or Colonial, honeys, I label simply "Pure Honey." British Isles honey I label "Pure English," "Welsh," or "Irish," as the case may be.—A. G. ROWE.

Trade Catalogues Received.

A. H. Bowen, Coronation Road, Cheltenham.—Mr. Bowen's bees and queens are now well known, and his catalogue contains a full list of all the useful varieties of bees and queens. We notice he is introducing the American plan of supplying combless packages of bees in 2-lb lots with queen. A number of appliances are also listed, including several of Mr. Bowen's specialities.

W. P. Meadows, Syston, Leicester.—Mr Meadows keeps quite up to date, and though his catalogue is not so large as some others, all that a bee keeper needs is listed. Two new articles, the Dempsey smoker and a new hive tool are illustrated; also Meadows' BCWB clearing board. His XL All hives are too well known to need comment.

Bee Shows to Come.

May 24-27 at Guildford.—Surrey B.K.A. Show. Two Challenge Trophies, Apis Club Silver Medal, B.B.K.A. Silver and Bronze Medals and Certificate, Surrey B.K.A. Silver and Bronze Medals, Open Classes Honey, Wax, Appliances, etc., Demonstrations, Lectures, etc.—Hon. Secretary, W. E. Hamlin, 43, Norbury Court Road, Norbury, S.W.16.

Royal Show, Cambridge, July 4 to 8.—Over £40 in prizes. All classes open.—Schedules and all information from Mr. E. C. R. Holloway, Burwell, near Cambridge. **Entries close May 20.**

July 26-27, at Cardiff, Sophia Gardens.—Glamorgan Bee-keepers' Association, in connection with Cardiff and County Horticultural Society's Show. Open Classes. Special prizes: Taylor's W.B.C. Hive and Apis Club Bronze Medal.—Schedules from Secretary, Chas. F. Davies, 5, Borstal Avenue, Cardiff.

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FOR SALE, 10 healthy Stocks Italian Hybrids on 6 frames, April delivery, carriage paid; inspection invited; price 40s., or £15 the lot.—MRS. F. C. BLAKE, King's Worthy, Winchester. r.d.12

IN CONSEQUENCE of the Herefordshire County Council giving up their Restocking Scheme, the Apiary is for disposal. Italian Hybrids, all good, healthy 10-frame Stocks, all 1921 Queens, either with or without hives, without hives sent in special travelling box carriage paid to nearest station, 70s.; box charged 10s. extra, which will be returnable and cash allowed when received. Also 200 drawn-out Shallow Combs, 1¾ top bars, perfectly healthy, 18s. 6d. per dozen, carriage paid. Orders booked in rotation. Cash with order.—J. ARNFIELD, Arncroft, Breinton, Hereford. r.d.17

PURE ITALIANS, Bozzalla's, 2 Stocks, £7 2s. 6d., carriage paid.—DAY, "Vine Cottage," Exning, Suffolk. d.14

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CYCLE, Gentleman's, 1922, 20-guinea model de luxe, fitted with B.S.A. 3-speed gear, metal gear case, all accessories, latest improvements, as new; approval willingly; accept £8 10s.—69, St. Paul's Avenue, Willesden Green, London. r.d.16

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SELL.—Rotax all-brass Motor Car Head Lamps, self-contained acetylene, very powerful, 30s. the pair; two small powerful Acetylene Brass Head Lamps, with separate generator, suitable light car or cycle car, £3 the set; Austin Rear Wind Screen, mahogany framework, £7; Mills' Automatic Acetylene Generating Plant, suitable for 10-roomed house, £6; quantity of Acetylene Gas Brackets and Chandeliers, prices with particulars; small folding Magic Lantern, 30s.; single barrel .410 Gun, 30s.; motor cycle all-rubber Ponco, reaches to ankles, wind- and weather-proof neck and sleeves, 50s.; all carriage forward.—HERROD-HEMPSALL, Old Bedford Road, Luton, Beds. c.77

WILLOW HERB, plant now, blossoms July till frost, 12, 2s. 6d.—BOWEN, Apiarist, Cheltenham. c.193

ITALIAN HYBRIDS, Simmins' strain, Stocks, 5-comb 35s., 10-comb 65s.; delivery April; must sell owing to removal; box 10s., returnable.—ERNEST GRIFFITHS, Helsby, Cheshire. c.174

BEES.—Italian Swarms from healthy immune strain, May and June, 30s.—W. YOXALL, Oaken, Wolverhampton. c.179

TWO strong Stocks Italian Bees, guaranteed healthy, 10 frames and W.B.C. Hives, £5 each, or £9 10s. the lot.—WIGGINS, The Bungalow, Norton Road, Wembley. r.c.199

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SURPLUS.—Stock of Bees on 10 frames and Hive; healthy. — CARTER, "Goldsands," Southminster r.c.138

SURPLUS STOCKS.—Italian Hybrids, 1921 Queens, 8/10 standard frames, April delivery, guaranteed no disease, £4 10s. each, free on rail.—Box 58, B.B.J. Office, 23, Bedford Street, Strand, W.C.2. r.c.142

STRONG, healthy Italian Hybrid Bees, May and June Swarms, 30s., carriage paid; box 5s., returnable.—H. ROBINS, 290, Priory Road, St. Denys, Southampton. r.c.128

HAVE A FEW more strong Stocks Hybrids on six standard frames, wired combs, 1921 Queens, good working strain, for April delivery, 50s., carriage paid.—WM. CHANNELL, Grove Apiary, Histon, Cambs. c.166

20 STRONG STOCKS ITALIAN HYBRIDS, good working strain; free from disease; satisfaction guaranteed; April-May, 80s., carriage paid; Hive, 20s.; box 10s. extra, returnable.—REV. COOPER, 62, Park Hill, Carshalton. r.c.153

OVERSTOCKED.—"Every colony wintered." 10-frame Stocks pure Italians, Penna or Buckfast 1921 Queens, delivery April, 75s., carriage paid. —WADHAM, 5, Gold Street, Cardiff. r.c.109

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ITALIANS.—Nuclei, 1922 Queens, 3-frame, May 40s., June 32s.; Colonies, spring delivery, 6, 8, 10 frames, 50s., 62s., 73s.; carriage paid; returnable crates.—ATKINSON, Fakenham. r.c.41

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STRICTLY BUSINESS.—One dozen Flavine—S Powders, 1s.; a Japanned Sprayer, post free, 6s.; a Floorboard Feeder, to fit under any hive, 10s., post paid.—S. H. SMITH, 30, Maid's Causeway, Cambridge. d.36

THE ACARINE 1921 ECLIPSE PAD.—It knocks out mites and moths. Your money back if not satisfactory. Price 5s., post paid.—S. H. SMITH 30, Maid's Causeway, Cambridge. d.37

FLAVINE CANDY, 4 lbs., 5s.; 6 lbs., 7s.; 10 lbs., 11s.; all post paid.—S. H. SMITH, 30, Maid's Causeway, Cambridge. d.38

BOOK NOW!—Choicest home-bred Carniolan Queens for 1922.—PEARSON & GALE, Marlborough. b.24

ADMINSON'S SEMI-COMBS.—Nuclei on these combs from mid-May at cheapest rates.—PEARSON & GALE, Marlborough. r.b.66

GORDON ROWE, 28a, Moy Road, Cardiff.
'Phone: 2422. Tel.: "Sunflower, Cardiff."

PARCHMENT CONTAINERS, stamped "Fine Lemon Curd," offered at half price to honey producers who can affix labels over the printing, 1 lb., 4s. 9d.; ¾ lb., 4s.; ½ lb., 3s. 6d.; ¼ lb., 2s. 3d. per 100. Also plain 2 lbs., 14s.; plain 1 lb., 9s. 6d. per 100. Add for carriage 1s. 6d. to each 5s. value ordered. Pure Honey for bee feeding, etc., 60-lb. tins, 50s. cwt., f.o.r. Terms cash. Samples 6d.

Advertisement Rates.

British Bee Journal or *Bee-keepers' Record.*

	£ s. d.
Full page	4 10 0
Half page	2 16 0
One-third page	2 0 0
Quarter page	1 15 0
1½ in. across page	1 10 0
1 in. across page...	1 0 0
½ in. across page...	0 12 0
1½ in. single column	0 17 0
1 in. single column	0 12 0
½ in. single column	0 7 0

Discount for a series of consecutive displayed advertisements:—Six insertions, 2½ per cent.; Twelve insertions, 5 per cent.; Twenty-six, 15 per cent.; Fifty-two, 30 per cent.

QUEEN CLEOPATRA RULES THE FINEST COLONIES.

Don't buy "any old bees." If you were a queen-egg how would you like to be brought up in a wooden cell-cup, or dragged from cell to cell on the tip of a feather? No thank you, no artificial queen-rearing for us! Primarily honey producers, we find it pays, though perhaps more trouble, to rear our young queens "in heat"; with bees this condition occurs under the swarming impulse. 10-, 6- and 3-frame Cleopatra Stocks from **23/-**. List free

THE THAMES VALLEY BEES (REGD.), TEDDINGTON. d.39

INSTRUCTION in BEEKEEPING

PRACTICAL AND THEORETICAL

My Apiary will be open for a limited number of pupils during this season. Terms and particulars from

W. HERROD-HEMPSALL,

The W.B.C. Apiary, Old Bedford Road, Luton, Bedfordshire.

BOWEN,
CHELTENHAM

Trial Order Convinces.

SUPPLIES SUPERIOR SUPPLIES

For FRAME MAKING.

The BOWEN WIRING BOARD will prove invaluable. It holds frames square and true while making and wiring, provides gauges for boring, lever to tighten frame while wiring, stand to open saw cut when inserting foundation and embedding boards. There are tins for holding the nails and the reel of wire is mounted on a spindle enabling it to be drawn out evenly without kinking. Saves both time and trouble. Send for one to-day. Price 6/-, postage 1/3.

BURTT & SON,

Manufacturers of Beekeepers' Supplies

Stroud Road, Gloucester.

Full Illustrated 1922 Appliance Catalogue free on application

THE

British Bee-Keepers' Association.

Insure *now* against loss by damage done through bee stings. All particulars from

W. HERROD-HEMPSALL, 23, Bedford Street, Strand, London, W.C.2.

Dutch Bee Market.

April 6th, 7th & 8th.

The first of its kind ever held in Britain.

THE DUTCH BEE MARKET will be held at the **Sports Field, Berkeley Avenue, Bath Road, Reading.**

Convenient to centre of town and easily accessible from Railway Station. Motor Buses and Trams pass the place.

Excellent train service to Reading including cheap week-end fares.

Hundreds of Skeps and Stocks for Bee-keepers to examine. Guaranteed absolutely free from any kind of disease.

Splendid opportunity for Associations to buy for their members and for those who intend starting Bee-keeping commercially.

PRICES EMINENTLY REASONABLE.

Bear in mind Dutch Bees are resistant to disease beyond all others (as borne out by independent investigation). Dutch Bees winter better than any and Dutch Bees hold the record in Britain for Honey production.

Send for my Catalogue—it will interest you.

R. WHYTE, Bee Farmer,

Cumbernauld Station, DUMBARTONSHIRE.

MANY NEW IDEAS NEW MEADOWS SYSTON, LEICESTER

We are not offering a Prize to customers who find mistakes in our Catalogue. There are some in it, but the prices are right.

STEEL, West Ashling, Chichester.

1922. ITALIAN QUEEN BEES. 1922.

May and June, each 12/-; four £2 0 0; one dozen, £5 0 0.
July and Aug., each 10/-; four £1 10 0; one dozen, £4 0 0.
Sept. and Oct., each 8/-; four £1 4 0; one dozen, £3 10 0.

S. H. SMITH, 30, MAIDS' CAUSEWAY, CAMBRIDGE.

SKIPWITH CANNELL is pleased to announce that **American Beauty Nuclei** can be obtained for Spring delivery from

Mr. HOGAN, Boxford, Suffolk (See Business Advertisements.) Please order direct from him.

My 1922 American Beauty Breeding Queen has already brood in five combs (2,000 feet above sea level!). Her stock gave 117 lbs. of honey and 9 lbs. of bees in a year so poor that many stocks headed by queens of other strains failed even to secure their winter stores! Quality counts.

An American Beauty

May	June	July	Aug.—Oct.
12/-	10/-	9/-	— —

Safe arrival, prompt service and satisfaction guaranteed, of course——also gentleness, activity, beauty, hardiness, and disease resistance; blood will tell! I never mail a queen I wouldn't *like* to keep.

SKIPWITH CANNELL, The American Breeder of **American Beauty** Queens, **Aux Sieyes, par Digne, B.A., France.**

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The Bee-Keepers' Calendar.

APRIL, 1922

13 Thursday. "Watching the water running to the sea,
Watching the bridge, the stile, the path behind,
Where the white violet's sweetness brought the bee,
He paid the price of being overfond."
John Masefield, "The Daffodil Fields."

14 Friday. "They go not, when rain threatens, far afield,
Nor trust the sky, when East grows boisterous,
But, courting safety 'neath the city walls
Sip water there and make short journeys thence."
Virgil. Georgics. Book IV.

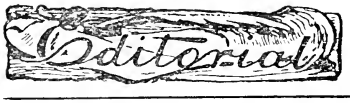
15 Saturday. "The lambkin crops its crimson gem,
The wild-bee murmurs on its breast,
The blue-fly bends its pensile stem
Light o'er the skylark's nest."
James Montgomery, "The Daisy."

16 Sunday. "In a word, thou must be chaste, cleanly, sweet, sober, quiet and familiar; so will they love thee and know thee from all others."—*Charles Butler*, 1609.

17 Monday. "The bright light crocus and the snowdrop, timid,
Bold daises gazing ever on the sky,
And golden cups with dewy nectar brimmèd,
About thy palace floor in myriads lie.
With new-waked life the busy air is teeming,
Flits the gay butterfly and hums the bee;
In fitful sunlight the moist rocks are gleaming
There comes a murmur of the distant sea."
H. E. Clarke, "A Spring Chorus."

18 Tuesday. "Come and like bees will we gather the rich golden honey of noontide."—*Meredith, "Pastorals."*

19 Wednesday. "Where the bee sucks, there suck I;
In a cowslip's bell I lie;
There I couch when owls do cry:
On a bat's back do I fly
After summer merrily."—*Shakespeare, "The Tempest"*



Seasonable Hints.

The cold weather that has visited all parts of the country lately will to some extent have checked the egg-laying activities of queens, unless the bees have had extra wrapping and a little stimulative feeding. In managing the apiary the bee-keeper must know and be ruled by the conditions prevailing in the district. The times of the honey flow vary greatly in different parts of the country. In some the fruit bloom is the main source of surplus, and this will be out in a very short time if warm weather comes. In such districts it will be necessary to unite stocks so that they are strong enough to occupy the supers. If it is desired to preserve the queens a nucleus may be made for each one, but it must be well protected and fed. Later on in the season they may be utilised for nucleus swarming as described on pp. 95-97 of "The British Bee-keepers' Guide Book." Where clover, sainfoin, etc., are depended on for surplus, there is a longer time available for building up moderately strong colonies by stimulative feeding. They may also be helped by giving them a comb of *mature* brood from an extra strong colony. Some districts have not enough forage for surplus until the heather blooms in August. Whatever the time of the main flow the bee-keeper should know approximately when it will come, and be prepared for it.

A Dorset Yarn.

"There is a tide in the affairs of men, which taken at the flood leads on to fortune."

Now is the flood time for building up stocks for early surplus. We have seen our bees upon the tops of sections that were left partly filled last October, this proves that enough warmth is rising upwards, and that they are searching for more room to carry stores, those that have no racks can be seen through the strip of glass across the ten frames (these have a board cover with a strip of glass to see through). All of the surplus racks have drawn out sections, some of them have not yet been emptied, only the uncapped cells have been cleaned out. We have had very bad weather this last month, but we keep rain water and sugar in a tray filled with stones close to them; each fine day there are bees taking up water; we keep a cover over in wet weather so as not to let the sweet water be wasted.

Wednesday, April 5.—The bees were on willows in great numbers, the best day for a long time; Mr. MacPhail, our county bee expert and horticultural lecturer, was over on that day, the glad hum of so many bees was quite an object lesson to him, there are no willows near his bees, as there are near ours; it has been the same each day as the sun shines, even the gorse is neglected for them, they are still to be seen on the Prunus, they are flying far from the hives; that is a good sign that they are strong. We are still being asked for bees, letters state that stocks have been robbed out, every particle of food taken out of the hives, where they all looked so strong and active only a few days before; only one has written that the bees had abundance of stores, but all died. The Italians seem to be the greatest robbers. I had four Italian stocks to keep for the widow of a clergyman; they were placed near two lots of mine and three of the county stocks; they have cleaned out all of them, each has a rack of sections on them just as they came in August. These are carrying in pollen at a great rate, it looks as if three parts of them were laden with pollen, but nectar must be taken in as well as there are even more bees on the female trees of willows than on the male ones.

Our gooseberries are showing their little purple buds, these will soon be open, then our bees will have plenty of food plants. These bushes have been greatly in demand this last season; one grower writes me he has sold out at good prices. He said it was because I spoke so much of them when lecturing in that neighbourhood; but I assume it is because so many people have destroyed their old plants when the gooseberry mildew came so badly into Dorset during the war. Gooseberries give the most nectar of any bush fruit, they have so many flowers, rasps follow them over a longer season, but the weight of hives is very pronounced as these flowers open. This is the flood time; as our bees are building on the tops of the bars they can be seen on all the ten frames; this proves that the brood nest is extending. Shall place the boxes of combs that have been robbed out on the top of these strong stocks. I find it is a good plan to get up an extra strong colony, also, it is a good plan to stop the building of so many drone cells. If there is more room for the bees, they will not so early get the swarming fever; it is then that they build so many drone cells. I find that they build these on new foundation at the end of April; one year when looking over the combs I found one that had a lot of drone cells nearly all over one side. There were eggs and larvæ in many of them; not wanting so many drones, I took the whole comb out, the new bar of worker foundation that was given the stock was nearly all drawn out in like manner in a few days. I then divided the stocks by taking out the queen and four

combs on May 2; they never wasted time in altering worker foundation to drone cells but quickly drew out the new combs and filled them with worker brood and stores; neither of the stocks swarmed that year.

Books tell us that when a brood box is placed on top and the queen takes possession, an excluder is placed between them to keep her on the top. This is considered a good way to get increase, as bees, finding the queen is not in the lower box, will raise another queen. By taking away the bottom lot to another stand and placing the top lot with the queen on the old stand all the working bees will go back to the old place; this gives you two stocks without the risk of losing the bees in natural swarming. I did this once and found that there was not any young brood in the old brood box; had to take out a comb of eggs and brood from the top box and exchange it for one from the lower. That was a loss of 15 days without a queen. I consider this to be bad policy, but have always found that we learn by failures as well as by success. The modern way of placing the queen on a comb of brood in the empty box and the full one on top, with an excluder between the two is all right when there is plenty of warm weather, but is risky if done too early and there is a spell of cold weather.

Everyone has his own special way of increase, and if it is successful without the risk of losing swarms, and if it gives the owner plenty of surplus honey, it is well, but what is best for me is as few drone cells as possible. If it takes six workers working all day to keep one male who does no work, and there are many hundreds of drones in a hive, the owner cannot get the amount of surplus that he ought. As it is, the weight of surplus is the balance at the bank after all the new bars and sections are paid for; this is the fortune that the flood-tide leads up to. All writers tell us that a great number of drones is against surplus honey. If we can step in any way the building of drone cells we shall be making a move in the right direction. I think it was Maerterlinck that classed this building of so many drone cells as the only weak spot in the life of the bee.

When bars of drawn-out comb are given to bees in the brood nest, if they have patches of drone cells built in them we have taken them off down to the foundation, but they do not then always fill the space with worker cells. Perhaps it was not cleared off entirely. One hesitates to destroy any worker cells when this is done. At this season of the year bees seem to want more water than at any other. That they have a preference for rain-water is very clear in this place. There is a running ditch from a spring. One never sees them on the stones, but where the rain-water soaks away on the by-roads by the sides of the hills the bees fly up as one walks. To-day, Sunday, April 9, as my friend Squire Tomlinson walked by on these moist lanes the bees flew up at every step. They were taking up moisture between the stones. I have seen this in other years on the main roads after a storm. Squire Tomlinson says he is feeding with warm syrup at the feed-hole over the brood nest. He realises that this is the flood-time that will lead on to fortune.—J. J. KETTLE.

Jottings from Huntingdonshire

What a strange mixture of weathers we have had this past week! Cold, heat, rain, drying winds, clear skies and skies which hid the sun from view. When the sun has shone the bees have made the most of his light and heat. Sunday, the 2nd, was a wonderful day, as was also Tuesday, the 4th, and the creatures of the hives did not hesitate to make the most of the opportunities for foraging. One stock got so far as preparing for a swarm. Walking around the apiary I saw them, and scolded them. "You rascals," I said; "get on with your work and don't dare to swarm; to-morrow may be dull and cold." "Master, we must," they said; "we are crowded out." "Rubbish!" I replied. "Crowded out, indeed, and you have several combs to work upon." "We haven't, master; truly we haven't. We have all our combs filled, and so full that we are in one another's way." I spoke crossly. "If you do swarm I shall put you all back again," and with that left them. In the afternoon I took another look at them, and there they were hanging about. They spoke first this time. "Master, we really must swarm; we cannot exist here much longer," and, crossing their throats—see that wet, see that dry, fashion—swore that they were half-stifled. "That being so," I said, you must be supered," and, suiting my action to the words, lifted off the roof. When the quilt corners were turned back I found there were two or three combs uncovered by the bees. Further investigation led me to apologise to the bees, saying, like Pharaoh's butler, "I do remember my fault this day." I had in this hive as an experiment tried what I can recommend as a good wintering board. Take a frame of comb which has honey on the one side only and on the other nail over a piece of stiff cardboard large enough to reach the bottom and the two sides of the hive. When one is short of division boards this may be used instead: in fact, for wintering I am not sure if it is not preferable. As soon as I saw it I remembered placing it there, but had during the winter quite forgotten it. Taking the cardboard off was a simple matter, and the bees, glad to have more room in the brood nest, soon settled down to work.

I am sorry to see bee-keepers of repute still using the term "Isle of Wight" disease. To the uninitiated every bee disease is "I.O.W." If bees are badly wintered and perish from cold, it's "I.O.W." If wintered on bad food and dysentery follows it's "I.O.W." If wintered on insufficient food and the poor insects die from starvation, "I.O.W." is responsible for the loss. I have even met a man who wintered his bees in a hive that was damp-proof neither at the top nor the sides. His bees died, and as he extracted the mouldy combs he pointed out the mould as a sign that "I.O.W." had been working its fell power within the hive. One worse than this was a statement I once heard made in response to a question. The questioner asked, "When one discovers in February or March that their bees are dead, and on examination finds hundreds of dead bees buried in their cells, what would be the cause of death?" Any intelligent bee-keeper would

have at once inquired if there were any honey within reach of the dead bees, as the condition described suggested at once starvation. But not so our self-styled expert. His answer I will give word for word, so far as I can remember it: "You can depend upon it, ma'am, your bees died of *the* disease. It's like this, when disease gets a good holt of the bees they loses their power over their muscles, and those bees what you saw dead in their cells had disease so bad that they had just strength enough to crawl into their cells, but no strength to get out again." *Verb. sap.*

With regard to the labelling of foreign honey. One wonders often why grocers apparently prefer to sell foreign honey—some, but not all, being very poor—to English. If the demand for home honey was greater than the supply one could understand it better: but so far as shops are concerned this is not always the case, as the advertisement columns of the "B.B.J." will show. The trouble often lies in lack of co-operation. It is well known that wholesale confectioners and wholesale grocers do not care to buy honey in small lots. Offer them a ton and they will be ready to negotiate. I have it on good authority that a certain firm asked a great bee-keeper to quote his price for a ton of honey. The price quoted was £125, in bulk. This, it may be argued, is only about 13d. a pound. But when the bottles are provided and the labour of bottling is paid for, and the cost of distribution is taken into account, and also a margin of profit for the wholesaler, what price can it be sold at by our friend the retail grocer? It is evident that not only do we need co-operation, but willingness to sell surplus honey at a much cheaper rate than we look to get. Being able to sell a limited quantity at a good price locally spoils us. Again, a large London firm asked to be supplied with 12 gross of sections per year. How can this be done without co-operation? And where is the man who can pack that number, say, in four consignments? We've a lot to do and learn before we can reduce the foreign supply of honey to even one-half its present bulk.—E. F. Hemming, Steeple Gidding.

Week-End Bee-Keeping.

(By S. H. Smith, Cambridge.)

(*Continued from page* 160.)

In taking out the second comb, D. B., we first pull one end an inch or two along the tin runner on which it rests, and then we pull the other end to match. This little manœuvre avoids rolling or crushing any bees between this and the next comb when we lift it out. Before moving it, we always glance quickly at the exposed side of the next comb. A queen bee may sometimes be seen there. No queen is in sight, so out comes comb No. 2.

We hold each comb we are examining horizontally over the others, so that if a queen were on it and she were to fall off she would drop into the hive, and not on the outside of it, to be probably lost in the grass. Now we lift up one end vertically, give a twist to reverse the sides, lower the end, and we see the opposite side, upside down.

Eggs! D. B.? Those little thread-like things at the bottom of the cells. It takes about three days for the larvæ to hatch out; more accurately speaking, 76 hours. But we may leave refinements until later on, and at present it will suffice to—— Queen! There she goes! That long-bodied, yellow bee, moving sedately over the cells. Look! D. B. She is laying! Look well, old man. See how she carefully examines the cells, then turns, and inserts her abdomen and lays an egg. You are in luck to see this performance the very first time you look into a bee stock. Yes, her wings are missing; I've clipped them off. I'll tell you all about it at some other time.

The eggs laid in regular order in the middle of the comb show a queen is there if we had not seen her. If I were working by myself I should look rapidly over the combs, add the other brood chamber and close the hive. But as this is your first lesson we will go through the combs carefully and systematically.

We will now put the first comb and this second one in the clean brood chamber, placing them in the same relative positions they occupied in the old brood chamber, and we cover them with this clean quilt to keep the bees quiet.

Comb No. 3. Please keep up a gentle spraying over the bees and combs as I handle them. Sealed brood! Note the appearance of those dull, brownish, raised capped cells. Those open cells, containing variously-coloured matter, are pollen cells. Surrounding them are open honey cells, and higher up those bright yellow, flat-capped cells contain ripe sealed honey.

We put comb No. 3 alongside the others, and out comes comb No. 4.

Drone cells! Those large ones, capped with bullet-headed covers. Queen cells! Those long, indented, acorn-like formations. It is time we had a look into this stock. Dear me! I did not anticipate all this. All of us make mistakes, D. B., and the bees are always getting ahead of us. The best we can do at this game is to correct any mistakes as quickly as possible. I am going to shake this comb free of most of the bees, dropping them into the new hive. They will soon join the others on the combs.

There! Now we have a clear vision. We will first cut out that piece of drone comb and replace it with a piece of worker cell foundation. See how easily and quickly it may be done with a sharp knife blade, which cuts wax better if it is first moistened. You cut a piece of foundation the size and shape of the cut-out part, push it into place and the bees will do the rest. In a few days' time you can tell where the operation has been done only by the lighter colour of the cells.

Let us cut out those queen cells. None are sealed, and you can see the fat grubs plainly. We put all such odds and ends of wax into this tin box, as it pays to save wax in an apiary. But if you care to, you may take home those cells, and by reading your Guide Book and studying the cells you can learn a lot. In goes comb No. 4 with the others.

Comb No. 5. Larvæ! This is what I have been looking for—a comb with both sides nearly filled with little, white, crescent-shaped and shining grubs in all stages of

development. Again we shake off the bees to be able to see more clearly. Impress upon your memory, D. B., the natural shape and condition of these bee babies, all glistening with health. Spray away—a bath won't harm the tender grubs.

An old timer can tell at a glance if all is well—even one irregularly shaped or coloured grub would catch his eye at once. Your bee education will not be finished until you see some such sight in an apiary. It may be years before you see it in your own. But when it comes you will have to be able to spot it and to deal with it promptly. But this unpleasant part of your bee-keeping education may be a long time away.

Comb No. 6. Emerging brood! Note the little jaws working scissors fashion and sawing away at the cappings. There are not enough bees on this comb to bother us, so we need not shake them off, and you will notice the different appearance of the young and the older bees. It takes some time for the youngsters to cut their way out. There are several just emerged, crawling over the centre of the comb. They are at first soft and feeble, and they can only totter about slowly. Fix their appearance in your mind, and later on you will not make the mistake of shaking or brushing these tender bees off the combs when manipulating a bee stock. If you did they would be lost, as the other bees would carry them outside. (*To be continued.*)

The Labelling of Imported Honey.

As a result of the enthusiastic and well-attended Conference held at Reading on Saturday, April 8, under the auspices of the *Apis Club*, a delegation committee was appointed to see the proper authorities regarding the labelling of imported honey with the country of origin, and with the name and address of the producers, or the responsible distributors. The members of the Committee are :—Messrs. Beverley (Chairman of Messrs. E. H. Taylor, Ltd.), F. M. Claridge (Commercial Honey Producer and Breeder), J. Herrod-Hempsall (Editor, *British Bee Journal* and *Bee-Keepers' Record*), J. B. Lamb (Vice-President of the *Apis Club*, and Chairman of the *Middlesex B.K.A.*), and R. Whyte (Commercial Honey Producer and Breeder). Mr. Lamb will also represent the *Bee World* owing to the inability of its editor to be often present in London.

The Committee has full powers on behalf of the Conference to act according to its discretion, and is considered representative of the different sections of the industry and the bee Press. It is immediately starting on its work, and in order to do this satisfactorily the receipt by it of helpful memoranda from bee-keepers' Associations and honey producers will be appreciated. For the sake of concerted action all communications should be addressed to the Secretary of the Committee at 23, Bedford Street, Strand, London, W.C.2.

A full report of the Conference will appear in the May *Bee World*.

British Bee-Keepers' Association.

ANNUAL MEETING.

(*Mr. Cowan's address, continued from page* 164.)

"It was in 1874, at the first honey show at the Crystal Palace, that the Association was started, with Sir John Lubbock, who afterwards became Lord Avebury, as President. I was elected one of the Vice-Presidents and a member of the Committee, of which I was elected as their Chairman at the first meeting, and this position I occupied whenever I was present. Subsequently, thinking that the members themselves would like a change of Chairman, it was decided that the election of the Committee should be by voting papers sent to every member of the Association, and that the one getting the largest number of votes should be Chairman for the year. At every subsequent election I obtained the most votes, and this went on while the voting was done in this manner, and since this rule was altered I have been elected by the Council as their Chairman ever since, an honour which I highly appreciate, and thank them for all the kindness they have shown me and the assistance they have given. Jealousy and quarrelling amongst the members of the Committee nearly brought about the extinction of the Association. I was wishing to resign, as I found it difficult to manage the troublesome members, but was induced by one or two to continue, and when, in 1878, a meeting of the members was called with a view of winding it up there were only 20 members who decided that the Association should be continued. One of them, Mr. Jonas, our Treasurer, is present to-day, and I believe, next to me, is the oldest member of the Association. The Rev. H. R. Peel attended this meeting and undertook to take up the work of Secretary if I would consent to remain as Chairman. The discordant elements were removed, and you have the result of that work shown to-day in the position to which not only the Association but also bee-keeping has attained. County Associations were organised and experts sent out, the first one being Mr. Baldwin, who really created the rôle. Members of the Committee went to the different counties and assisted in the formation of local Associations. Thus by 1883 there were 36 affiliated to the Parent.

"The County Associations wanted experts, as the three supplied by the parent Association were not sufficient for the demand, so in 1882 examinations were organised and have been continued ever since, and certificates have been granted for various degrees of proficiency.

"In 1881 we had an appeal from Ireland, where bee-keeping was in a very backward condition, to 'Come over and help us; we want to know something about bee-keeping.' In answer, the Association sent over Mr. W. Carr, of Manchester, and Mr. C. N. Abbott, with a bee tent and assistant, who toured from north to south of Ireland and gave lectures and demonstrations with live bees. The whole cost was defrayed by friends of the Association, and resulted in the Irish Bee-Keepers' Association and two

others being started. Then Scotland was also assisted by members of the Committee, who, at their own expense, travelled to Scotland to help the Caledonian Bee Association. Bee-keeping was spreading rapidly, and in 1882 so many different sized hives were in use that, to simplify matters and render appliances less costly, it was decided to have a standard frame, and one that was nearest to the size used by the most successful honey producers was adopted, which is that now in use.

"By constantly bringing bee-keeping before the Government, recognition came in the form of the Technical Education Act, 1889, which enabled County Councils to make grants for agricultural work, and the affiliated Associations were assisted in obtaining these grants, which have resulted in a great deal of good instructional work being done. Very few know the amount of the work done by the Association to bring the industry to its present position, but I have been through it all, and can testify to the labour entailed by the pioneer work, of which the present generation of bee-keepers knows nothing.

"In 1894 the Association formed a Joint Committee with the County Councils, of which I was chairman, for the purpose of obtaining statistics of bee-keeping and the prevalence of bee disease, and this was the first move made towards legislation for dealing with it. The Government at that time were sympathetic, but bee-keepers were not strong enough in numbers to obtain the needed legislation. Several attempts have been made since, but, for various reasons, the last on account of economy, it has not been secured.

"Although in my 83rd year, I hope to be connected with the Association for some time yet, and do what I can to help. In any case, I shall always take an interest in it and its work. There may be trouble at times, as there has been in the past, but if the local Associations will support the parent and work harmoniously together, as they are doing now, any difficulties may be easily overcome. A few years ago we were in trouble and disfavour with our affiliated Associations, who felt their interests neglected, but this was owing to a secretary who, unfortunately, through ill-health, let things go. To-day we have an energetic secretary, upon whom we can rely to carry out the work in an efficient manner, consequently our relations with the Associations are most friendly.

"I thank you all for the presentation made to Mrs. Cowan and myself. These gifts will be treasured by us, and also by our family, and serve as happy mementoes of my connection with the Association and all the kind words which have been spoken here this evening." (Applause.)

A lecture, illustrated with lantern slides, on "The Anatomy of the Honey Bee" was then given by the hon. secretary, to whom a vote of thanks was passed upon the proposition of Mr. Reid, who also included the lantern operator, Maurice Herrod-Hempsall, whose efficiency might be equalled, but not excelled, by one of maturer years.

An entertainment was then given by members and friends. Mr. and Mrs. A. Gambrill gave an exhibition of Eastern magic; the tricks were cleverly executed and much appreciated, that of catching goldfish from space with rod and line being especially good. The Chairman remarked that it was a pity Mr. Gambrill was not engaged on the re-stocking scheme. Mr. and Mrs. J. Bryden also rendered songs, duets, and musical selections; their items were an exceptional treat. Mr. Sander delighted with a recitation given in splendid style; while Rev. E. F. Hemming also gave a recitation, to, as he said, "amuse the youngsters," but the grown-ups enjoyed his humour just as much as the children. Mr. J. B. Lamb was a frequent contributor to the enjoyment of the evening by his musical skits; it was a revelation to many of his friends that he could be so skittish.

The National Anthem, at 9 p.m., brought to a close what was admitted by one and all one of the most successful and enjoyable annual meetings ever held.

LECTURES AT GOLDER'S HILL PARK.

A special course of six lectures on bee-keeping will be given in the British Bee-Keepers' Association Apiary, London County Council Park, Golder's Hill, London, N.W., on Fridays, April 28, May 5, 12, 19, 26, and June 2 at 6 o'clock each evening.

Those desiring to attend these lectures must make application at once for enrolment and enclose the fee of 10s. 6d. for the full course to Mr. Herrod-Hempsall, Hon. Secretary, 23, Bedford Street, Strand, W.C.2.

North Cheshire Chat.

I hope somewhere there is better bee weather in the British Isles than has prevailed in these parts during the last three weeks. Snow, north winds and frost. Every night we have had frost during this period. On April 1 we had to break the ice on the pond before the cattle could drink, and at noon the soil was too frost-bound to dig. Spring was ushered in by 14 deg. of frost. What of the bees during this period? They have only been able to fly on four days during the last three weeks, and then only for an hour or so. On these occasions they brought in pollen freely from the sallow willows, which are now the sole source of pollen; there are absolutely no other flowers in blossom in these parts. No blackthorn, plum or damson, which are usually in profusion at this time of year. Beginners who read of bee-keepers in the south with supers on need not worry. We shall have our turn, but not yet. Do not look to see how many combs have brood in under present weather conditions; do not even attempt to spring-clean floorboards. It is not safe with a temperature below 45 deg., such as we are now experiencing. Make sure the bees have food by giving them candy or thin syrup. I give mine a 2-lb. jam jar about once a week, quite warm, turned directly on top

of frames, a piece of calico tied tightly over the mouth of jar. Of course, this is placed in feed-hole in the quilt, immediately covering up again warmly.

I hope that very soon this abnormally cold spring may change for the better, so that we can get amongst our bees with freedom, and get record takes of honey. The longed-for weather may come with a rush, therefore be prepared, for when the little insects can get a move on they are some hustlers.

Spring Cleaning.—It is never safe to remove a hive from its stand unless the shade temperature is above 50 degs., however warm the sun's rays may be. Those who have any doubt as to whether a queen reigns in their hives should note the action of the bees. If they are carrying in pollen freely, all may be taken as well; but if only an odd one is seen to come in loaded, and the bees take short flights from the entrance and come back again, seeming unsettled what to be doing, they are probably queenless. The best thing to do in these circumstances is to unite to a lot having a queen as soon as practicable. A little thin syrup may help to stimulate the queen to lay, but, above everything, keep the brood chamber warm. Plenty of quilts over frames is more essential now than in the depth of winter. Reduce the entrance to hives to 3 or 4 inches, or only just wide enough to accommodate the flying bees.

Depth of Broodchamber Walls.—I do not quite agree with those who recommend 11-in. or 12-in. boards for same, unless extra space is wanted below the bottoms of frames. I always think sides that are above the level of the tops of frames a nuisance, especially if one has a surplus chamber glued on to the frame tops by brace combs or propolis. It is much easier to prise such off if one can get a chisel between, which is not possible with sides 2 in. or 3 in. above frame tops. I shall no doubt be told to vaseline bottoms of supers; but this is not a certain specific against brace combs.—D. J. HEMMING, Appleton, Warrington.

Echoes from Cornwall.

Thursday, March 9, was a glorious spring day, and the bees were exceedingly busy bringing in pollen and carrying out the old dead and shrivelled. Many other of our insect friends were out in their glory, and I particularly noticed one gorgeous specimen of the peacock butterfly flitting along the hedgerow, and a large bumble bee a few feet away searching the holes for a probable place for a nest. These, together with hundreds of primroses, and the skylark singing, made one feel that indeed spring had come.

To-day I had a somewhat unusual happening among the bees. One little lot, which were wintered in a skep to take their chance, left the skep in a few seconds and joined themselves to a stronger lot by their side, and a little later I found one queen dead outside; fortunately she was an old one. On examining the skep they left, I found very little honey, and, to my surprise, some unsealed brood. What caused their departure, leaving young brood, I cannot imagine, as there was a good cake of candy over the top; but all the same I am not sorry, as they will now form one decent stock, and they also have a young last summer's queen with them, so they have saved me the trouble of either uniting or requeening.

It is now time to be seeing to spare hives, giving them a good scrubbing with disinfectant and then a good coat of paint outside. They will then be ready for the "spring transfer." Those that the bees have wintered in can then be renovated and fitted up for the honey flow later on. The bee keeper's season has now started, inasmuch that he will now prepare his section racks, shallow frame supers, etc., in readiness.

It is wonderful how each season the bee-keeper, like his little charges, shakes off his lethargy and gets that "fever" for the coming season.

May it be as good a season everywhere as it was in this county last year.—A. D. BENNETT (C.B.K.A.), Illogan, Redruth.

Essex Bee-Keepers' Association.

ANNUAL MEETING.

The forty-second annual general meeting of the Essex Bee-keepers' Association was held on Saturday, March 25, 3.30 p.m., at the East Anglian Institute of Agriculture, Chelmsford. In the absence of the Chairman, Mr. C. G. Winn, of Hornchurch, presided. Amongst those present were Messrs. E. F. Boggis-Rolfe, of Wormingford Grange; G. S. Faunch, of Ilford; Mr. and Mrs. Taylor, of Ongar; H. W. Scott, of Baddow; E. Scott, of Kelvedon; J. H. Cornall, of East Ham; Miss Jameson, Chelmsford; Mr. C. H. Alder, of Roxeth, the Secretary, G. R. Alder, and the County Bee Inspector.

The minutes of the last annual general meeting being read and passed, the annual report and balance-sheet for the past year was carried unanimously.

The officers for last year were accorded a special vote of thanks for their valuable services, and were unanimously re-elected.

It was decided to contribute one guinea to the Cowan Memorial Fund, as a small appreciation of the invaluable assistance given to bee-keeping by Mr. T. W. Cowan. The Secretary reported that the Essex Agricultural Society had made the necessary grant for holding the summer show in June at Chelmsford, and urged members to support the honey classes as much as possible. It was also proposed to hold an autumn show as well, but as the necessary support from the Branch Associations was not forthcoming, the proposal was abandoned.

The meeting closed after passing hearty votes of thanks to the Principal of the Institute of Agriculture for use of the building, to Mr. W. P. Jobson for use of office for committee meetings, to Miss E. W.

Jameson for valuable assistance in detection of diseases of bees, to the stewards at Rochford show last June, and to Mr. Cyril Edwards for his able and successful defence of the Association in the action brought against it by a former expert.

The members then adjourned to Hicks' Restaurant, and all partook of a very enjoyable tea. (*Communicated.*)

Middlesex Bee-Keepers' Association.

ANNUAL MEETING.

The annual meeting of the Middlesex Bee-Keepers' Association was held at the Temple Bar Restaurant on Thursday evening, March 30. In spite of the inclement weather there was a large and representative attendance of members and friends, who were glad to embrace the opportunity thus afforded of combining bee business with a little social relaxation. The arrangements for the meeting had been entrusted to Mr. R. R. Babbage, and to him the thanks of the Association are due for the admirable manner in which he carried out the task. At 7 p.m. the company sat down to an excellent high tea, and thus prepared itself for the more serious business that was to follow. After tea, tables were cleared, and the general meeting began. In the unavoidable absence of the president of the Association, Sir Harry Brittain, K.B.E., M.P., the chair was occupied by the Chairman of the Committee, Mr. J. B. Lamb. In submitting the report of the Committee for the past year, the Chairman said that though the financial results had been somewhat disappointing they were hopeful that many of the unpaid subscriptions would be secured during the current year. The members would be gratified to learn that an application to the Middlesex County Council for a gift of the bees and appliances belonging to the Middlesex Bee Committee had proved successful. They had established a model apiary at Cutbush's Nursery, St. Alban's Road, Barnet, and it was proposed to hold classes in practical bee-keeping at the apiary during the season, for which a nominal fee of 7s. 6d. per course of six lessons would be charged to members. The Committee regretted that owing to indifferent health Mr. Mullen had decided to resign the office of honorary secretary to the Association. The services which he had rendered had been greatly appreciated, and they offered him their sincere thanks. Their thanks were also due to Mr. Herrod-Hempsall for kindly allowing the use of his offices for the monthly meetings of the committee; to Mr. and Mrs. Aspin for their efforts to establish a library for the Association; and to Dr. Abushâdy and Messrs. Adminson, Ltd., for generous gifts. A show of honey, bees and appliances had been held at Brentford, and owing to the zealous efforts of Mr. Babbage, who undertook the arrangements, the function was a great success.

The Chairman then presented the medal granted by the British Bee-Keepers' Association to Mr. A. Emerson for the best exhibit in the Brentford Honey Show.

The next business was the election of officers. Sir Harry Brittain was again elected President of the Association. Vice-Presidents elected were Mr. T. W. Cowan, Mr. A. W. Perkin and Col. Bowles.

Elected as members of the Committee were Mr. J. B. Lamb, Mrs. Babbage, Mrs. Hodson, Miss D. Scott, Messrs. J. G. Bale, R. R. Babbage, J. L. Rogers, F. A. Bahns, W. E. H. Hodson, W. S. Smith, C. W. Mullen, C. Young and Dr. Abushâdy.

Hon. Secretaries: Messrs. G. J. Flashman and C. R. Aspin.

Hon. Treasurer: Mr. R. R. Babbage.

Expert: Mr. G. J. Flashman.

Lecturer: Mr. Herrod-Hempsall.

Mr. R. R. Babbage was re-elected as representative to the British Bee-Keepers' Association Council.

On conclusion of the business, the remainder of the evening was spent in listening to an excellent programme of music, to which the following ladies and gentlemen very kindly contributed: Mrs. Babbage, Miss Flashman, Messrs. J. B. Lamb, Valentine, Coysh, Aspin and Babbage. Mr. Arthur L'Estrange officiated most ably at the piano. Thus a most enjoyable evening was brought to a close, and the thanks of the Association are due to all those members and their friends whose efforts contributed to make the function such a success.

(*Communicated.*)

Lecture at Boxmoor.

There was a very good attendance at Boxmoor Hall, Hemel Hempstead, when a lantern lecture on "Bees and Bee-keeping" was delivered by Mr. Chas. A. Day, a lecturer to the Herts. Bee-keepers' Association. A most interesting collection of slides was shown on the screen, and though the lecture lasted nearly two hours, the audience listened to the speaker with rapt attention. When he related some of his own experiences with bees, or, with the help of pictures, some interesting facts about the life of this busy little insect, it could not fail to arouse one's enthusiasm in apiculture.

The lecturer dwelt at some length on the necessity of bees for the fertilisation of blossoms. An interesting slide was shown of a pear which was only partly developed, and this, Mr. Day explained, was caused by the flower not having been properly fertilised by the bee. The fruit was not so large as another, which had been properly fertilised, and the next slide of the interior of the two fruits showed that the pips in the former were diminutive, which proved the lecturer's statement to be true. He stated that there were 100,000 varieties of blossoms which the bee visited, and he concluded by saying how

barren the world would be if the flowers disappeared because the bee ceased to carry on its valuable work of fertilisation.

At the close of the lecture a very hearty vote of thanks was given to Mr. A. C. Day for his most interesting lecture, which everyone had thoroughly enjoyed. A vote of thanks was also passed to Lieut.-Col. G. Huddleston for kindly acting as chairman. Special thanks are also due to Mr. J. Steptoe for manipulating the lantern with his usual skill, which added greatly to the success of the lecture.

A meeting of bee-keepers was afterwards held, and it was decided to form a local branch of the Herts Bee-keepers' Association, of which Mr. W. H. Needham, Hill Brow, Hemel Hempstead, was elected hon. secretary, and he was asked to call a meeting so that the other officials could be elected and the rules drawn up for the new Association. Every bee-keeper in the district is advised to join, and should communicate with the Secretary, who will supply all details. The minimum subscription is 2s. 6d.—(*Communicated.*)

Sheffield and District Bee-Keepers' Association.

A most interesting and instructive lecture (illustrated with lantern slides) was delivered in the Sheffield University, on Friday evening, March 31, 1922, by the Rev. G. H. Hewison, M.A., F.R.M.S., on "The Honey Bee—at Home and Abroad," including a description of the enemies and diseases of bees.

The President of the Association (J. H. Richardson, Esq.) occupied the chair, and in introducing the lecturer said that Mr. Hewison was too well known to need any introduction to bee-keepers, but to those who were present who had not seen any of the wonderful photographs taken by Mr. Hewison, he had no hesitation in introducing the lecturer as one of the most scientific photographers connected with bee-keeping at the present time.

Mr. Hewison, who on rising was greeted with much applause, said that he was pleased to be received with such enthusiasm, and that he wished to speak on some of the methods of bee-keeping practised both at home and abroad, and also to show some of his latest photographs of his investigations in the Nosema and Acarine diseases in bees.

The lecturer exhibited close up on 60 slides to illustrate his lecture, those dealing with his latest investigations in the Nosema and Acarine diseases being loudly applauded.

At the close of the lecture a hearty vote of thanks was proposed by Mr. Irwin Packington, and seconded by Mr. S. Livsey.

The lecturer, in reply, said he had been delighted at the reception accorded him upon this occasion, and it had been a pleasure to him to give to the bee-keepers of Sheffield some of his latest investigations in connection with bee diseases.—(*Communicated.*)

Bee Shows to Come.

May 24-27 at Guildford.—Surrey B.K.A. Show. Two Challenge Trophies, Apis Club Silver Medal, B.B.K.A. Silver and Bronze Medals and Certificate, Surrey B.K.A. Silver and Bronze Medals, Open Classes Honey, Wax, Appliances, etc., Demonstrations, Lectures, etc.—Hon. Secretary, W. E. Hamlin, 43, Norbury Court Road, Norbury, S.W.16.

Royal Show, Cambridge, July 4 to 8.—Over £40 in prizes. All classes open.—Schedules and all information from Mr. E. C. R. Holloway, Burwell, near Cambridge. **Entries close May 20.**

July 26-27, at Cardiff, Sophia Gardens.—Glamorgan Bee-keepers' Association, in connection with Cardiff and County Horticultural Society's Show. Open Classes. Special prizes: Taylor's W.B.C. Hive and Apis Club Bronze Medal.—Schedules from Secretary, Chas. F. Davies, 5, Borstal Avenue, Cardiff.

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BUNGALOW, furnished, to Let until October 25, 1922; two bedrooms, living room, hall, etc.; very large garden with good fruit trees. Bees and Hives are established, and can be arranged about. Apply, G. Bryden, 46, Star Hill, Rochester. r.d.51

SWARMS from healthy Stocks, May and June, 25s., carriage paid. Cash with order. ELLIOTT, Fredericks Road, Beccles. r.d.52

FOR SALE, two Stocks of Italian Hybrid Bees, £3 5s. each; no disease. R. H. BOTT, Bennington, Stevenage, Herts. d.55

MAN, thoroughly experienced in bee-keeping and queen rearing, or poultry and chickens combined, make all wood work, seeks engagement. Only reasonable wage expected. Box 59, BRITISH BEE JOURNAL Office, 23, Bedford Street, Strand, W.C.2. d.57

HONEY suitable for manufacturing purposes or bee food, £2 per cwt.; sample 3d. MRS. YARRAD, The Laurels, Swaton, Billingborough. d.54

I WILL EXCHANGE new Villiers' 2-speed Motor-Cycle for bees; a beautiful machine, costing nearly £70. WYATT, Bishopswood, Chard. d.56

BLACK MINORCAS.—Three late hatched Pullets in full lay and one Cockerel, 12s. 6d. each; also Buff Orpington Cock, hatched February, 1921, fine colour, first-class breeder, 15s.—MRS. FOX, 5, Strafford Road, Twickenham. d.53

NATURAL healthy Italian Swarms, 30s.; second, 25s.; package returnable.—CADMAN, Codsall Wood. r.d.55

OVERSTOCKED.—Six 8-frame strong Dutch Colonies, 1921 Queens, all wintered, guaranteed free from disease, April delivery, £3 each, carriage paid; boxes 10s. extra, returnable; bargain.—MRS. SMART, The Nook, Bures, Suffolk. r.d.58

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The Course for the Junior Certificate in Bee-keeping begins on Monday, 10th April, at the Apiary, Holmes Farm, Kilmarnock, and lasts for ten weeks. Hours, 2.30-3.30 daily.

Fee for the Course, £1.

JOHN CUTHBERTSON,
Secretary.

4/4/22. d.59

FOR SALE, three Stocks Italian Hybrid Bees on 8 standard frames, 1921 Queens, free from disease, early May delivery, 70s. each, carriage paid; box 10s. extra, returnable.—F. ROBERTS, Marshfield Wood, Chippenham, Wilts. d.60

12 (ONLY) ITALIAN 6-FRAME STOCKS, immediate delivery, almost ready to swarm, 45s.; guaranteed healthy; twice as cheap as nuclei; travelling boxes 10s. extra, returnable.—J. YOUNGER, 16, Maid's Causeway, Cambridge. r.d.62

HAVE A FEW more strong Stocks Hybrids on six standard frames, wired combs, 1921 Queens, good working strain, for April delivery, 50s., carriage paid.—WM. CHANNELL, Grove Apiary, Histon, Cambs. r.d.63

SIX strong Stocks healthy English Bees, splendid workers; 8 frames, £3; 10 frames (wired), £3 15s.; travelling crates, returnable, 10s. each. MAYES, Bennington, Stevenage, Herts. d.64

OVERSTOCKED.—Strong Italian or Hybrid Stocks, wired frames. Any reasonable offer. Will sell and guarantee satisfaction.—COURTNEY, Murray Road, Northwood, Middlesex. d.72

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TWO STOCKS in W.B.C. Hives and one empty W.B.C. Hive, £11 the lot; also sundry Appliances.—D. PEARMAN, Elm Cottage, Great Woodcote, Purley. d.79

ITALIAN BEES for Sale in five W.B.C. Hives, crowded with bees and brood, very strong and healthy, £25, or offer.—Box 61, B.B.J. Office, 23, Bedford St., Strand, W.C.2.

HONEY.—First quality Sections, 18s. dozen, carriage forward. Cash with order. R. COUSINS, Misterton, Doncaster. d.81

SWARMS.—Can book limited number of 3-lb. Swarms for despatch before May 15 at 37s. 6d. —AVERY, Deverill, Warminster. d.82

RHODE ISLAND RED EGGS from pens consisting of winners 3rd and 4th Melksham, 3rd Bradford, 1st and special Weatherby, 1st and special Gillingham, headed by cocks 3rd Club Show and 4th Trowbridge, 15s. per dozen; also Columbian Wyandottes, equally good, 10s. per dozen.—AVERY, Deverill, Warminster. d.83

CARPENTER offered temporary employment, hive and shed making; must be quick and accurate; ex-Service man only. State when free and lowest wages.—THOMAS, Burwell, Cambs. d.86

FOR SALE, 10 healthy Stocks Italian Hybrids on 6 frames, April delivery, carriage paid; inspection invited; price 40s., or £15 the lot.—MRS. F. C. BLAKE, King's Worthy, Winchester. r.d.12

IN CONSEQUENCE of the Herefordshire County Council giving up their Restocking Scheme, the Apiary is for disposal. Italian Hybrids, all good, healthy 10-frame Stocks, all 1921 Queens, either with or without hives, without hives sent in special travelling box carriage paid to nearest station, 70s.; box charged 10s. extra, which will be returnable and cash allowed when received. Also 200 drawn-out Shallow Combs, 1¼ top bars, perfectly healthy, 18s. 6d. per dozen, carriage paid. Orders booked in rotation. Cash with order.—J. ARNFIELD, Arncroft, Breinton, Hereford. r.d.17

CYCLE, Gentleman's, 1922, 20-guinea model de luxe, fitted with B.S.A. 3-speed gear, metal gear case, all accessories, latest improvements, as new; approval willingly; accept £8 10s.—69, St. Paul's Avenue, Willesden Green, London. r.d.16

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ITALIAN HYBRIDS, Simmins' strain, Stocks, 5-comb 35s., 10-comb 65s.; delivery April; must sell owing to removal; box 10s., returnable.—ERNEST GRIFFITHS, Helsby, Cheshire. c.174

TWO strong Stocks Italian Bees, guaranteed healthy, 10 frames and W.B.C. Hives, £5 each, or £9 10s. the lot.—WIGGINS, The Bungalow, Norton Road, Wembley. r.c.199

HAVE A FEW more strong Stocks Hybrids on six standard frames, wired combs, 1921 Queens, good working strain, for April delivery, 50s., carriage paid.—WM. CHANNELL, Grove Apiary, Histon, Cambs. c.166

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STRONG 10-frame Stocks Italian and Italian Hybrids, healthy, April-May, 75s., carriage paid; Hive, 20s.; box 10s. extra, returnable.—CLUBB, Cranston, Sudbury, Suffolk. r.d.61

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STOCKS, good, healthy, on standard frames, £3 5s. each; 10s. deposit on box, returnable. Cash with order. MOORHOUSE, Rothwell Haigh, near Leeds. r.d.50

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GRAFTON ITALIAN BEES AND QUEENS are good as money can buy; highest grade only; Nuclei, 3-frame £2, 4-frame £2 10s.; carriage paid.—All particulars, MASOM & HEDLEY, Grafton Regis, Stony Stratford. d.73

BRITISH GOLDENS for beauty, hardiness, industry. 3-frame Nuclei, £2; 4-frame, £2 7s. 6d.; delivered May and June. Book now. 10s. with order, balance when ready. Boxes charged 30s. unless returned. F. M. FALSHAW, Avondale, Stocton Road, Guildford. r.d.46

SEVERAL Stocks of Italian Bees, headed by Bozzala-Bowen's or Adminson Queens, on 8, 6 or 4 frames, at 65s., 50s., 41s., carriage paid; cash with order; returnable box, 10s.—MYTTON, Lyncroft Apiary, Stafford Road, Lichfield. r.d.48

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ITALIAN, Carniolan and Hybrid Stocks and Nuclei for Sale, strong and healthy, delivery April, May, low prices.—DAVIDSON, Forest Road, Burton-on-Trent. c.197

THE SEASON WILL SOON OPEN, and bees, bee-keepers, and faithfully yours will be so busy that we won't know which way to turn. Have you ordered your Guaranteed American Beauty Queens yet? Better hurry! The first three weeks in May and the first week in June are already so full that I must withdraw them until I see how the season goes. By the way, while May, June and early July may be the best months for increase, I believe that late July, August and early September are the very best months for re-queening—besides queens are cheaper then, even my American Beauties. May, 12s.; June, 10s.; July, 9s.; August, 8s.; September, 8s.; and every queen guaranteed. Please order just as soon as you know how many you need. Here's hoping that the season is the best yet.—Faithfully yours, SKIPWORTH CANNELL, Aux Sièyes, par Digne, Basses-Alpes, France. r.d.28

THE
British Bee-Keepers' Association.

Insure *now* against loss by damage done through bee stings. All particulars from

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BOWEN, CHELTENHAM

SUPPLIES (*List free*).

1—Famous Cotswold Queens.
2—Package Bees: 2/3 lb. Lots.
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The Bee-Keepers' Calendar.

APRIL, 1922

20 Thursday. "The lesser whitethroat in the orchard growth
Beneath an apple planned
A hive for nest."—*Norman Gale, "A Cotswold Village."*

21 Friday. "When daisies fill the grass like snow
And blossoms white the trees,
And to the bee-master I go
To buy a skep of bees.
I do not pay in brown money,
Or silver new or old;
Nay, that my bees may have Good Luck
I cross his hand with gold."
E. S. F., "Bee Lore" (B.B.J., 10, v., '17).

22 Saturday. "There's life abroad:—from each green tree
A busy murmur swells;
The bee is up at early dawn
Stirring the cowslip bells."—*Emily Taylor.*

23 Sunday. "Behold there was a swarm of bees and honey in the carcase of the lion. And he took thereof in his hands, and went on eating."—*Judges* xiv. 8, 9.

24 Monday. "The meadows, long so dumb
Beneath the aching frost,
With bees are all a-hum
With cowslips all embossed."
A. P. Graves, "O Blessed Hour."

25 Tuesday. "And below the wild plum
Where the slanting sun shines,
Shows its snowy white bloom,
Flings its subtle perfume
On the breeze
To the bees."—*Clinton Scollard, "Wild Plum."*

26 Wednesday. "How they hover around,
Tiny bandits and bold,
Making thefts honey-sweet
With a murmurous sound."—*Clinton Scollard, "Wild Plum."*

Obituary Notice.

MR. SAMUEL JORDAN.

We regret to announce the death of Mr. Samuel Jordan, which occurred on March 23 at his home, 25, Longfield Road, Bishopston, Bristol.

Mr. Jordan, who was 75 years of age, was born at Clearwell, in Gloucestershire, was trained for teaching, and as a schoolmaster did valued work in one of the elementary schools of Bristol. He held scholastic appointments at Street, Milbourn Port, Princes Risborough, before going to Bristol, where he became master of St. Philip's Boys' School, and there remained until the age limit necessitated his retirement. When this event took place so highly was he respected that an appreciatory reference was made at one of the meetings of the Education Committee to his conscientious work.

Mr. Jordan became early connected as a member of the British Bee-Keepers' Association, and was one of the oldest members of the Somerset Bee-Keepers' Association. His enthusiasm for bees and his capacity for teaching led him to go in for the examinations of the B.B.K.A. for Experts' Certificates, and in 1895, after passing his preliminary examination, he obtained highest marks in the Second Class, finally, in 1897, obtaining his First Class Certificate of Proficiency.

His knowledge of bees and the enthusiasm with which he was ready to discuss problems connected with the industry led to his services being utilised in Somerset for the purpose of demonstrations and addresses. He was for many years bee lecturer for the Somerset County Council. In 1897 Mr. Jordan was elected a member of the Council of the Bristol, Somersetshire and South Gloucester B.K. Association, and in 1900 was chosen as its Chairman, retaining this position until the Association was re-organised as the Somerset Bee-Keepers' Association in 1906, when Col. Jolly undertook the chairmanship, Mr. Jordan remaining as member of the Council. In the district he was perhaps best known as an examiner of candidates for the third-class certificates of the B.B.K.A., of whom a large number in the Western Counties passed through his hands. He was an expert judge of honey, and was selected one of the judges at the Royal Show when it was held in Bristol.

He was a frequent contributor to THE BRITISH BEE JOURNAL, and his writings showed that he had a thorough knowledge of the subject he was discussing. On retiring last year from the active membership of the Association, owing to the infirmities of old age, he was made an honorary life member, and we regret that his tenure of this position in the Association has been of short duration. By his death the Somerset Bee-Keepers' Association loses one who did much towards its advancement. We extend to his family our sincere sympathy in the loss they have sustained. The last letter he wrote was to Mr. L. E. Snelgrove, apologising for inability to attend his lecture at Bridgwater on February 23 last. It took him two days to write, showing how feeble he had become.

Jottings from Huntingdonshire

A week of warmth, and O, the wonders of hive and field. Is there anything more pleasing to the eye than five or six bees at a time marching abreast into their hives laden with pollen? The chief pollen sources at the moment seem to be the sallows, the daisies, the celandines and trumpet daffodils, while nectar is gathered from the blackthorn, pear blossom, box and arabis. Years sometimes run their course when the arabes are ignored by the bees; this year these delightful flowers are being worked from morn to eve. It has been a grand week for spring cleaning. "How does the little busy bee improve the sunless hour?" I crave pardon for the alteration in the couplet, because I am sure some, in fact, most, of our hive bees use the time within the hive tidying up. It is worthy of note, however, that some bees do this more thoroughly than others. To spring clean some hives is a very easy matter, as the occupants are so punctilious that they see to it that very little débris is littered on the floor, and little or no propolis glued to the bottom bars of the frames. Other hives show other methods. One or two of my stocks propolised every frame down to the floor-board, making holes through the bottom portions of the comb inside the frames as links to the whole colony. Scraping off winter-hardened propolis is no easy matter, but it must be done. The strength of one's colonies is cheering; especially as one has hopes of having honey ready for the show bench in five weeks' time. It all depends on the weather, but I am an optimist in this matter. An optimist, it has been said, is a man who having bought an article from a Jew believes he can sell it to a Scotsman at a profit. I have no intention of testing my optimism in this way, being content with the signs of the time. The call of the cuckoo on the 13th, the appearance of the swift on the 14th, the

number of wheatears and chiff-chats, all speak one word, "Spring." The blossom of the fruit trees—so long held in check by the recent north and north-east winds, are now in great plenitude, ready to hide the branches with white and red and pink. The long baking the trees had last year will result in an unusual wealth of fruit bloom, and those who have bees ready to work those flowers will be able to note the greater crops of fruit to follow compared with those who have trees, but no bees within a mile or two to work the blossom. Thanks, again, to the perpetual sunshine of 1921 there is a great promise of abundance of wild white clover. How is it, some people ask, that this plant flourishes after a summer which refused to let the plants flower, scorching up the blooms before they opened? The answer is clover seed will lie dormant in soil for years waiting for certain conditions before germinating. Anything which unlocks the soil will stimulate the germinating of these seeds. Clover invariably follows where fields have been dressed with basic slag, which sweetens and opens the soil. A spell of sunshine bakes soil, but if it continues the baked soil becomes powdery, and it only needs a shower once the soil is in this condition to bring up myriads of clover plants. White field clover is perhaps a better nectar-bearing plant than wild clover, but one is thankful to see clover whatever its species and colour. Look, then, at the swards striped with two shades showing the chain harrow has been at work, and visualise what will follow in a few weeks' time, and then see that you have bees ready to search out every good source of nectar for their use and yours. This will make you an optimist.—E. F. Hemming, Steeple Gidding.

Hive Contraction and Expansion.

By D. M. Macdonald.

(*Continued from page* 81.)

When the swarming season is about over, if working with a large number of combs, it pays to contract the brood area when working for a late flow such as the heather. Our best queens during the latter part of July required a second body to afford ample space for their laying powers. On the advent of August one should be withdrawn, and ovipositing confined to a set of ten combs. Or, take a larger body with, say, fifteen combs all well covered with bees, and mainly occupied with brood, it would be advisable to confine them to nine or ten combs. In either case the combs withdrawn can be profitably disposed of to help other and weaker colonies to work up into first-class condition, as most of those withdrawn should be a mass of sealed and nearly emerging brood. In withdrawing one solid body the one left in position should be arranged to give some work for the queen, and if, as is most likely, they are pretty well stored with honey, this would be very quickly carried aloft to the supers, thus adding to the surplus take. The queen having ample space for laying will keep the bees busy, and in most cases shut out from their thought any desire for swarming now that August has come. A very large proportion of the working population will be thrown compulsorily into the supers, and store the honey where it is to the profit of the owner that it should be consigned.

Over-contraction, however, should be avoided even when August is with us. In certain seasons bees will swarm as late as the first half of that month. I have pretty frequently had swarms issue up to the 10th, and I know of others having them up to the 15th even under normal conditions. Contraction provides an abnormal set of circumstances, and may lead to over-congestion and the construction of queen cells. With a spell of very warm weather, and an over-small area in the surplus chambers, and an over-reduced brood chamber, the bees lie out in front of the entrance, and may loiter on the floor-board, or even sulk with a good flow on. The queen's ovipositing may be reduced to such an extent that the colony goes into winter quarters short of young bees, which are the mainstay of the community in early spring when the colony starts in-gathering and breeding. Another danger is that the queen, cramped for room below, may ascend and spoil sections, especially if she finds any of drone cell formation. At times, too, the workers having no available store-room for pollen carry it aloft, and thereby spoil the surplus stores. This will be particularly marked in sections worked behind a queen excluder in hives of the combination type, so that the practice has fallen into disuse. The same happens in sections worked over shallow brood bodies. The comb below is so packed with eggs, brood, young bees and newly gathered nectar that there is no space for a store cupboard, and hence both honey and pollen have perforce to be consigned above.

This refers to hives over-heavily contracted in the early days of August in heather districts, in hives with our more prolific queens where the whole range of two bodies, twenty combs, may be reduced at the end of July to one body of ten combs. The same dangers should be avoided where over-contraction takes place with more ordinary queens who may lay their heaviest during July. We do the queen-mother injury by cramping her powers at a period when Nature decrees that she should be most prolific. We do the stock a serious injury if we hinder this egg-laying, because the bees reared now are the ones who not only help the colonies to winter well, but to start spring work.

What I wrote in issue of February 24 and what has been said above may be considered as applying only to colonies worked for comb honey surplus. Expansion and contraction both can be considered as a rule-of-thumb process when we work for extracted honey, but in the case of sections either operation may be turned into a fine art as far as the brood body is concerned.

Let us now turn for a time to the extension of the surplus chambers. Early in the season see that you begin to extend timorously. Be early rather than late in starting. Novices frequently in the Query Columns inquire when they should place on racks of sections. It will be seen, I think, that our Editors seldom adhere to fixed dates in the answers they give. What would suit one season would rarely suit its successor. So much depends on the nature of the weather right on from the first dawn of spring, so much on the variability or steadiness of plant growth, and so much on the natural supply of nitrogenous and non-nitrogenous food carried into the hive, or the quantity of artificial stores supplied by the bee-keeper, that not only colonies vary in condition, but the same colony varies in preparedness at different dates. In fact, a colony early in May may at times be better fitted for surplus chambers than late in the month. When one can smell the presence of nectar in fruit bloom, be it on trees or bushes, when willows are yielding well, and plane or sycamore, and a host of other flowering trees are in bloom, and when white clover begins to bloom profusely, then, especially if the season is mild and weather steady, get your racks ready. Take a peep at the outside of outside combs, and if you observe the mouths of the cells looking white with newly laid on wax, place on your super chambers, one at a time. Not very long after when you observe bees have taken to the sections and are building and storing, place on a second rack *above* the first even before the bees actually demand more room. If they require the additional space as numbers increase rapidly they will occupy it, at first tentatively, then in greater force. It acts at first as what I call a "cooler rack," and I have great faith in it as a swarm preventer. Later, another rack may be added as need demands, and let the act be too early rather than too late.

Early in August begin to contract, and this for at least two good reasons. The nights begin to cool, even succeeding some splendid days, and so bees would desert the top chambers during the night. Then the more you can concentrate your forces the better work will be done, because it will be overtaken more expeditiously.

The question of regular expansion and contraction of the hive interior, both of the brood body and super chambers, requires rather more consideration than it generally receives, and the proper manipulation during the working season might serve as a subject for one of the series of essays running their course in the RECORD.

Honey Imports.

The registered value of honey imported into the United Kingdom in the month of March, 1922, was £12,203.—From a return furnished by the Statistical Office, H.M. Customs.

Spring Troubles in the Apiary.

Troubles are certain in any business we choose to engage in. Each has its own peculiar and particular worries, and bee-keeping is no exception to this rule. Perhaps first I might place at the top of my little list "losses"—the fact that some of our charges do not answer the roll-call. This is always disappointing, and especially so if it be a recurrence of that dreaded Acarine disease. Who has not, these last few years, had the feeling of hopelessness bordering on giving up the bees altogether, because of this particular trouble again and again? But "hope springs eternal." Do we stop planting potatoes because of wart disease? No, certainly not. We seek out an immune variety and go ahead. So we bee-men must not be less optimistic; we, too, must look for an immune variety of bees, and do likewise. It is very disappointing when this disease just shows itself when winter is on us and when nothing can really be done by us to improve matters. But wait and see when spring arrives if the bees survive, and determine the best way of tackling it.

But there are casualties that are preventible. Sometimes starvation is the cause. I remember looking over a friend's bees in spring; a very excellent man in many ways, but rather lax about his bees sometimes. We remarked on the quietness of one hive as we approached it, and on opening it found the bees dead. In answer to my friend's question, I replied "Starvation." No answer for a few seconds, then he said, "Well, I would rather it had died from any other cause." There was a certain amount of guilt attached to him, and a conscience that said, "I might have saved you, but I didn't." Just a little syrup in autumn would have saved a fine stock.

Perhaps the queen is the trouble in some stock, and a queen has sometimes a wonderful way of disappearing at a most inopportune time and leaving her family without hope or incentive. Very often a queenless stock is suspected some time before the weather is warm enough to open the hive and examine. Most bee-keepers are familiar with even the outside appearance of the queenless stock—the want of push and go, few pollen loads coming in when other stocks are busy, no door step swept and garnished, a woe-begone appearance which almost says "bereaved," or if your trouble be that counterfeit of the real mother, "a drone-breeder," it is just as bad. It will not be discovered in all likelihood until you have your first spring examination, then the lengthened-out cells (drone brood in worker cells), and the little diminutive drones making their appearance are easily noticed. In either case get them joined to another colony which is right in this respect with as little delay as possible. It is never a good policy at this season to try and requeen old bees; the first loss is always the least.

Perhaps robbing may be included as one of

the bee-man's troubles. It is almost preventible, but the "dishonest instinct" which may be latent is very easily aroused. A careless act, a leaving something exposed, feeding at a wrong time, may begin a hubbub in your apiary that is not easily quelled. But it is really a good thing that pleasures and successes are, as a rule, very much more frequent than troubles.

AYRSHIRE.

Week-End Bee-Keeping.

(By S. H. SMITH, Cambridge.)

(*Continued from page* 176.)

Combs No. 7 and No. 8 have plenty of eggs, larvæ and sealed brood. So have No. 9 and No. 10. We will place No. 7 and No. 8 in the centre of the extra brood-chamber and fill it up with drawn-out combs. Now we push No. 9 and No. 10 up against No. 6, and insert a d.o. comb between No. 10 and the wall. By sliding all the combs over we can insert another d.o. comb between No. 1 and the wall.

The extra brood-chamber now goes on top. On goes a clean calico quilt, over that pieces of carpet quilt cut to fit—now the roof. We reduce the entrance slides to two inches. We have doubled the capacity of the hive, and we must preserve the heat. We jar off any bees adhering to the old hive parts by bumping these on the ground—like this. All the old parts are piled on to the barrow, and we return with them to the honey house.

Your initiation has been a pleasure, D. B. All these preliminaries are a little monotonous, but when a would-be bee-keeper shows an intelligent interest none of us spare any pains in trying to help him.

Back we go with the second newly-painted hive and all the extras, and now we shall be able to work faster. There is one addition—this bottle of syrup. I like to warm up the d.o. combs in the sun, and to spray them with a little thin syrup before giving them to the bees. The heat rays of the sun at this season are so powerful that you can melt down wax combs in May quicker than you can in August.

Hive No. 2. As good as Hive No. 1—bees to burn. Notice that we approach all hives from the rear, and by stretching out your arm—like this—you may smoke entrances without being seen by the bees. Try it. Very well done. That's enough smoke.

Now without one spoken word we will treat this stock as we did No. 1. But first let me spread out those d.o. combs. I shall have to stop and turn them every now and then, or else the exposed cells would melt down. But you go on with whatever you may be doing.

Plenty of eggs, but I have not seen the queen, D. B. Neither have you. Never mind.

While I turn the d.o. combs please pour the syrup into the sprayer. Everything looks o.k. in this hive, and we will give the bees a treat. I should have syruped the d.o. combs of hive No. 1, but I did not want to distract your attention from the sequence of the movements. If the bees do not take to the dry combs we can easily warm and syrup them.

Notice those bees settling like snowflakes on your coat and sleeve and hand—all homing pollen carriers. See their little bodies telescoping in and out as they draw in fresh air supplies. Not a thought of stinging you enters their heads—you are all the same to them as a tree or a wall. They are resting to regain energy enough to get home. This is the season, D. B., to initiate a novice; one avoids a heap of trouble by starting early in the spring, and with good, strong, healthy and gentle Italian bee stocks.

Movement No. 5. See them! They are on to the combs like tigers! On with the calico quilt, etc.

Now for the third and last hive. I'll hunt up a pair of old gloves, and you may tackle the next stock all by yourself. You do not care to be bothered with gloves? Now, D. B., go slow. Better go through your first bee stocks armoured at every point. You can't tell as yet how stings may affect you; you may be immune or you may swell up like a poisoned pup. Well, if you will not use gloves rub the carbolic cloth over your hands. The main thing is to make only slow movements.

Here we are. Take the smoker, and see that there is sufficient fuel. Now by the great horned toad! There is no need to throw the smoker into the hedge. A man who has been over the top a dozen times should not act like that for one little sting on the hand. Here, let me show you. Yes, that tiny thing is the sting. You push it out with the sharp edge of the smoker nozzle, and puff a little smoke over the tiny wound. If you left it in it would go on pumping out all the poison in that little poison bag, and your hand and arm might swell up more than a bit. Rub the carbolic cloth over your hands. The puff of smoke and the carbolic odour will dissipate and disguise the poison odour, which otherwise might call other bees.

At it again, old top. That's better. The first time those bee-guards saw you coming and got there first.

If you see any drone comb please let me know. There was none in Hive No. 2, and if we find any in this stock I want to get rid of it at once. If you see anything that you don't understand sing out. Ah! I should have warned you, that thin nectar runs out of the cells when the comb is reversed. It makes a mess, but the bees will clean it up in no time. Of course, we should not throw away the results of their labour. Yes, some may be put back, but most of it will be consumed and lost.

Finish the job, old man. You display all the earmarks of a prospective good bee-keeper and I am proud of you.

Now we will have to scrape and scrub the

three old hives, and by this afternoon they should be dry and ready for painting. The Primus will soon heat a bucket of water. Light your pipe and take it easy for a moment.—S. H. SMITH.

(To be continued.)

Hubam Sweet Clover.

Through the kindness of a bee-keeping friend in America I have received a parcel of seeds of the new annual white sweet clover about which so much has been written in the American bee magazines.

"Hubam" appears to be a valuable plant both for farmers as well as bee-keepers.

Its growth is very rapid, and it is said to reach the height of several feet in a few weeks after sowing, blossoming continuously for several weeks after reaching maturity.

It will be interesting to note whether Hubam yields as heavily in this cooler climate.

At any rate, the experiment might be well worth making.

If any of your readers interested in planting for bees would care to have a few seeds and will enclose stamps I shall be pleased to send a little for them to try.

The cultural directions given for ordinary clovers would be about right for "Hubam."—A. H. BOWEN, Coronation Road, Cheltenham. March 11.

Dutch Bees as Honey Gatherers.

There is little doubt in my mind that the Dutch bee is treated with a prejudice it ill deserves. Naturally there are good, bad and indifferent in all species, and a bad Dutch colony is worse than useless, owing mainly to their great swarming propensities, and they certainly uphold the tradition that "bees never do anything invariably," more so than any of the others, but a really good Dutch colony is an asset, and this, of course, is a matter of strain.

I shared a bad opinion of them simply from prejudice, and my introduction to them was a mere chance. Mr. Flashman called one day to see me, and with him he had a Dutch virgin, a few hours old. He gave her to me, and I decided to give her a trial. She was very vigorous. I introduced her to one of my queen-rearing nuclei, and she was fertilised in due course. She was then introduced to a 10-frame colony, which gave me a reasonable surplus, considering I was periodically making nuclei from it, and made no attempt to swarm. From what I had heard I expected them to swarm, despite the fact of my making nuclei from them. The second year I left them alone. I did not make one nuclei from them, but, on the other hand, I anticipated her demands, and at the height of the season she had three brood boxes and three 6in. shallows fitted with worker base foundation. Again they refused to swarm, and, what is more, showed no sign of it, but positively worked like "niggers," and gave me an excellent surplus, which included some fine comb honey, so that after my trial I have nothing but praise for them.

The cry nowadays seems to be for Golden bees that are pretty to look at, but from my experience the more of the Golden element introduced and fixed the more delicate they become. Take the case of Italians, the leather-coloured is much to be preferred to the Golden, from a surplus point of view. I have tried both, but give me the one that delivers the "goods," and not the one that is pretty to look at.

A point I omitted to mention while dealing with the Dutch bees was their resistance to "Acarine" disease. I purposely sent a three frame nucleus to be put in a hive infected with this disease, and was pleased to hear that up to date they have withstood it; they were sent last July. By this I do not wish to infer that they are immune. In my opinion no bees are immune, despite claims to the contrary, but they certainly stand as good a chance as any, and better than many. —KENDALL YOUNG, Sudbury, Middlesex.

Murmurs from Middlesex.

February has filled the dyke—with black this year—and after the drought of 1921 it has been welcome. Nature generally manages to make an even balance if we only exercise patience. Everywhere we can see evidence that spring is at hand. Crocus bloom, white violets, primroses, and even a little white arabis in the gardens. Hazel catkins in the hedges, and a host of pushing green things at the hedgefoot; all proclaim the glad news. How the bees seem to enjoy the sunshine, and how busily they work, fetching water and pollen from the few blooms that are open. Who would not live in the country; why the very hum of the little bee repays one for many dull days. I mean by dull days, not days of boredom, but of cloudiness, for no country man ever feels dull. Who could? One sees nature face to face, and learns to love her ever changing loveliness. Winter with its storms, spring with its gentle beauty, summer pomp, and autumn with the harvest of all the season's goodness. Townsmen exist, the countryman lives. To walk abroad and hear the song of the birds alone makes life worth living. Stand with me in my apiary this morning (February 27). the air is full of the hum from the bees. A lark is singing overhead. Thrush, blackbird, robin, and a host of minor songsters all swelling the great chorus. Blue skies, bright sun, and balmy breeze, a hint of green in hedgerow and bottom, all add to the charm. With all this a town dweller asks me if we don't find it very dull out here, and seemed to doubt when told "No." Well, I suppose those who never saw the sun would not miss it, so those without a sense of the beautiful must find the country dull. Of this, however, I am sure; no real bee-keeper will ever willingly become a townsman.—G. J. FLASHMAN.

Sussex Bee-Keepers' Association.

ANNUAL MEETING.

A representative gathering of Sussex bee-keepers attended the annual meeting of the Sussex Bee-keepers' Association held at the Y.M.C.A. Rooms, Lewes, under the chairmanship of the Rev. D. L. Secretan, of Balcombe (a vice-president of the Association).

The 14th annual report of the Association, dealing with the year 1921, stated that the result of the year's work had been exceedingly encouraging, the number of members on the register at the end of the year being 252, as compared with 239 twelve months previously. Early in the year the Committee decided to utilise the balance in hand in propaganda work, with the view of increasing interest in bee-keeping, and a copy of a pamphlet specially prepared was forwarded to every known bee-keeper in the county. An immediate increase in the membership of the Association was the result. Under a scheme decided on at the last annual meeting two local branches had been formed—at Crowborough and Worthing. It was hoped that other local branches would be inaugurated during the current year, in the formation of which the Hon. Secretary of the Association would be glad to give information and assistance. The expert visited the apiaries of 226 members, as compared with 200 in the previous year, 913 stocks being examined, as compared with 980 in the previous year. While the Acarine disease was prevalent in a few (some 28 stocks showing symptoms of infection), the general condition of the bees was highly satisfactory. It was hoped that the annual show would be revived in the current year in connection with the Sussex County Agricultural Show.

The balance sheet showed an income of £103 5s., in addition to a balance in hand of £19 0s. 1d. at the beginning of the year. After meeting all expenses there remained a cash balance of £2 11s. 1d. at the end of the year and assets valued at £1 9s. 5d.

The Chairman, in moving the adoption of the report, expressed the view that the Association had not yet reached the height of its usefulness. He had great hopes that its work in the future would be extended. The Association might consider whether the length of the county of Sussex did not justify the appointment of two experts instead of one. They could not wish for a better or more capable Hon. Secretary than Mr. F. Kenward, to whose untiring efforts the success of the Association was very largely due. (Hear, hear.)

Mr. H. W. Anderson seconded, and the report and balance-sheet were adopted.

Thanks were accorded the retiring officers, and the officers for the ensuing year were elected.

Thanks were accorded the Rev. D. L. Secretan for presiding.

Tea was served, and afterwards Mr. A. Richards, of Carshalton, gave a lantern lecture on "Bees and Practical Bee-keeping," which included many valuable hints on the managements of bees." The lantern was manipulated by Mr. J. A. Sharpe, of Lewes. —*Communicated.*

Chesterfield and District Bee-Keepers' Association.

ANNUAL MEETING.

The first annual meeting of the above association was held at Chesterfield on Saturday March 25. Mr. J. Lindsay, of Cutthorpe, presided, and representatives were present from Belper, Clay Cross, Newbold, Calow, and Molymoor side.

The annual report was presented by the Hon. Secretary (W. E. Tate), who reviewed the year's workings in an interesting manner, and announced that the association had a membership of 45.

Mr. L. Ford, the Treasurer, reported that, after payment of all dues and demands, the Association had a small credit balance.

The Chairman, in moving the acceptance of the reports, spoke of the splendid work the Secretary had done, and declared that as a result of the Association's meetings and demonstrations, he had learned more during the past year in practical apiculture than he had in the previous 10 years. There was no doubt the Association was making headway, and during the ensuing year they hoped to start a library of bee literature.—*Communicated.*

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real name and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

Taking Bees Out of a Bedroom Wall.

HONEY COMBS 5½ FEET LONG.

[10647] On September 1 last I was called upon to take, or destroy, bees out of the wall in a bedroom. Picture to yourselves: Outside was a lean-to greenhouse about 15 ft. high by 12 ft. wide. The bees' entrance was another 10 ft. above, through a hole in which starlings had their nest also, both using the same entrance during the season 1921. The reason for wanting bees out was general repairs, painting, etc., and workmen were afraid of their company. At 3 p.m. I commenced inside the room, first a few sharp raps on lath and plaster with the flat hand, then smoke through a hole, which had already been bored, into honeycomb soon told me the joyful hum. Then with a scout axe I set to work, and broke plaster and lath from the corner and found the starling's nest in between stud work which measured 13 in. between studs, 5 in. between lath and plaster. Tracing the combs down till I came to bottom of their length (in between the next

studs), which was 5½ ft. deep, of various widths, with honey sealed all around and a nice brood nest in centre. Having provided myself with a nucleus hive holding five standard frames, I started cutting off combs, depth to fit frames; some cut two pieces, others three, saving all brood and securing them by wiring. Surplus honey was put into bowls for home use, and driving the bees upwards with smoke, towards their old entrance, arranging a temporary bracket to hold nucleus hive, with their brood, honey, etc., near the ceiling. The bees set to work inside their new home, carrying in every particle of honey left on walls. At 8 p.m. I blocked up window to put room in darkness, intending to leave bees to use their own entrance, but next morning, the workmen finding no bees about, I blocked up their entrance, so sealing them in the dark room.

September 3 being Saturday afternoon, and no workmen about, I went and opened the window wide, removed hive from bracket to side of window in full sunshine, and those bees which had crawled about inside the room soon found their way to new entrance. Later in the evening, when bees had ceased work, I moved them again to a bar-frame hive in an orchard near by, and commenced feeding, putting a few green twigs about entrance to make them note their new stand. By the end of September they had six full combs of sealed stores and brood, and plenty of bees. February 27, 1922, above stock very promising, carrying in pollen and water.—T. HAMMOND, Great Totham.

Granulation of Mixed Honeys.

[10648] I think it must be now some years since I wrote a line to the "B.B.J.", but some weeks ago I was rather interested in Mr. Kettle's description of his visit to Bournemouth and the class of honey he saw there in shop windows. Messy-looking stuff, very imperfectly granulated, etc.

This, of course, is a very common sight in shop windows, but what led me to refer to the matter was Mr. Kettle's expressed opinion that the condition he mentioned was caused by mixing different classes of honey, etc.

Now I do not for a moment wish to contradict Mr. Kettle, for this might have been his own experience in his own country, but I can assure him that for thirty-five years I have mixed all classes of honey, passing them through the extractor without any attempt of grading, and I have never seen anything but perfect granulation follow, providing the honey was ripe. I could give him the testimony of hundreds of customers as to this. I should, however, like to mention one cause of imperfect granulation seen in bottled honey offered for sale.

Honey is sent from the producer in bulk and in perfect condition, but various methods are used to liquify it, and a certain amount becomes very much overheated, with the result that the overheated part very slowly granulates, or not at all. While on this subject I should like to say that there are certain kinds of honey which, if not mixed with others, are too strong, and apt to set up indigestion. This has been found to be the case in eating certain classes of section honey.

[We have not heard of honey, strong or otherwise, giving indigestion. Possibly the wax in the section honey might do so.—EDS.]

Bees (Varieties of).—My opinion is, there are none to be compared to our natives. My one regret is that I have a difficulty in getting a pure strain of them. For some reason or other the native queen seems to know her business better than the Italian. Should it be a poor honey season she does not jam every corner of the hive with brood, and tax the workers to death to provide for them, but with the Italian there seems no sort of power to take seasons into account, and in the wettest and most honeyless seasons they do nothing but breed, breed, breed, and throw off swarms even in the pouring rain.

Feeders.—I have before mentioned the simple feeder made from Lyle's 2-lb. syrup tins. Pierce the LID with small holes, a dozen or more will not hurt. If pierced with the point of a 1¼-in. wire nail will do nicely. This is a perfect feeder in all respects. There is no need to use muslin or anything else, but just pierce the lid and invert over feed hole, or if supers are on take out two of the combs and place the feeder down on the tops of the brood combs, if once tried there will be no going back to the tie-over bottle feeders. In rapid feeding I use six or eight of them, in spring feeding just one tin now and again, according to requirements.

I must apologise to you, Messrs. Editors, for the length of my letter, but trust the above will not be without interest to some at least.—GWEN BROWNING.

Are Drones Always Killed Off?

[10649] It is said of rules that the exception proves them. And the rule for colonies of bees in possession of a fertile queen is that as soon as the nectar flow ceases towards autumn they kill off their drones. But do they?

I have a colony of bees, headed by one of Mr. S. Cannell's queens, and which last year gave considerable surplus. On their return from the moors, no nectar being available here, they, like the others, observed the rule by proceeding to kill the drones. I saw nothing strange in that, and on preparing them for winter I saw that the queen was there. But on seeing *drones* issuing from this stock on various occasions during their flights from November to February in the bursts of sunshine we have had, is, I think, very strange. But the drone generally died on the alighting board, and sometimes when looking at them I found drone brood at the hive entrance. This brood was on the point of emerging. I feared for the queen, and thought that a worker bee was "carrying on" in the hope of raising a "virgin" when

I saw the drone brood outside, and I would have dearly liked to open the hive and investigate, but a foot of snow, and the thermometer at 30 deg. Fah., deterred me. But I vowed I would open the hive on the first favourable day, and I had my chance yesterday (February 18). The sun was shining and the bees were flying. Using a little smoke, I took off the coverings and saw a stock of bees covering ten combs. They had come through the winter exceedingly well, for they appeared to be as strong in numbers as when packed down in October. I took out one of the central combs and found brood and eggs, while scurrying over the combs were *drones!* I lifted out another comb after returning the first, and found worker and *drone* brood. The queen was on this comb, sprightly alert, and in good condition.

But the drones! I saw a score at least during my hurried examination; why were they there? Usually I have no drones until April, at the earliest, and here is a stock of bees breeding them, to judge from the ejected drone brood, during the close season and with many mature drones on the combs. I have only one explanation to make now, since I have seen the queen, and that is: Having a superabundance of food they have allowed drones to be reared to use more quickly the glut of heather honey which is blocking the cells, which they require as cradles for bees, instead of cupboards for stores.

Probably that interesting "drone expert," the Rev. E. F. Hemming, can give me another on this curious behaviour of an apparently normal stock in the close season, when fine, sunny days have been few, and bleak, squally days, and blinding snowstorms (weather calculated to prevent breeding drones, one would think) have been many. I shall be glad of it.—JOHN BOUCH.

A Visit to Mr. Armstrong's Apiary.

[10650] Last July you published an account of a visit to Mr. Ellis's apiary at Gretna, by Mr. Armstrong, of Grangemouth, in which he described the difficulties Mr. Ellis had to contend with for want of space. A few days ago I had the pleasure of staying with Mr. Armstrong and visiting his apiaries.

What a contrast between the two apiaries! No finer site could be found for an apiary than that of Mr. Armstrong's. It is situated in the policies of what used to be the residence of the Marquis of Zetland.

His hives are arranged in a long row, sheltered at the back by the high wall of the kitchen garden, on the right by a large orchard containing all sorts of fruit trees, on the left by the mansion house, with a free flight in front across the park where abound hawthorn, plane, lime and other trees.

Mr. Armstrong had, at the time of my visit, 16 stocks in his apiary and four in another apiary about a mile away, all of which seemed to have come through the winter well.

The hives are home-made, and well made, holding up to 15 frames, and can be tiered to any height.

The queens are mostly Italians or hybrids, with one or two natives. Alongside the 15 frame hives are smaller single-walled heather hives, to which the bees are transferred before being taken to the heather.

These hold eight frames and two section racks on the top, which fit tight, and when the roof is on one might turn the hive upside down without doing any damage.

The district yields a light-coloured clover honey of finest quality. Like many others, Mr. Armstrong has been cleared out once or twice by Acarine disease, but the district around Grangemouth seems free from it just now.

Mr. Armstrong is president of the East Stirlingshire Bee-keepers' Association, and holds the Expert Beemasters' Certificate of the S.B.A.

It was quite an education to spend a day or two with such an enthusiastic bee-keeper. —H. M. LOCHMALIM.

British Bee-Keepers' Association.

LECTURES AT GOLDER'S HILL PARK.

A special course of six lectures on bee-keeping will be given in the British Bee-Keepers' Association Apiary, London County Council Park, Golder's Hill, London, N.W., on Fridays, April 28, May 5, 12, 19, 26, and June 2 at 6 o'clock each evening.

Those desiring to attend these lectures must make application at once for enrolment and enclose the fee of 10s. 6d. for the full course to Mr. Herrod-Hempsall, Hon. Secretary, 23, Bedford Street, Strand, W.C.2.

Bee Shows to Come.

May 24-27 at Guildford.—Surrey B.K.A. Show. Two Challenge Trophies, Apis Club Silver Medal, B.B.K.A. Silver and Bronze Medals and Certificate, Surrey B.K.A. Silver and Bronze Medals, Open Classes Honey, Wax, Appliances, etc., Demonstrations, Lectures, etc.—Hon. Secretary, W. E. Hamlin, 43, Norbury Court Road, Norbury, S.W.16.

Royal Show, Cambridge, July 4 to 8.—Over £40 in prizes. All classes open.—Schedules and all information from Mr. E. C. R. Holloway, Burwell, near Cambridge. **Entries close May 20.**

July 26-27, at Cardiff, Sophia Gardens.—Glamorgan Bee-keepers' Association, in connection with Cardiff and County Horticultural Society's Show. Open Classes. Special prizes: Taylor's W.B.C. Hive and Apis Club Bronze Medal.—Schedules from Secretary, Chas. F. Davies, 5, Borstal Avenue, Cardiff.

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STOCKS, good, healthy, on standard frames, £3 3s. each; 10s. deposit on box, returnable. Cash with order.—MOORHOUSE, Rothwell Haigh, near Leeds. r.d.50

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SEVERAL Stocks of Italian Bees, headed by Bozzala-Bowen's or Adminson Queens, on 8, 6 or 4 frames, at 65s., 50s., 41s., carriage paid; cash with order; returnable box, 10s.—MYTTON, Lyncroft Apiary, Stafford Road, Lichfield. r.d.48

FRAMES.—New Frames, brood or shallow, surplus of order, 50 delivered for 10s. 6d.—SMITH, Albany Wharf, Redhill Street, N.W.1. r.d.1

CARNIOLANS.—If you want superior Honey Queens, 10s., Nuclei from 45s., bred by an old-established honey producer, book now.—SWAFFIELD, Libertus Villas, Cheltenham. r.d.23

CHOICEST tested Tortora Queens, direct from Italy to your door, May 10s., June 9s.; reduction for ten.—Agent, HULBERT, "Châlet," Warwick Road, Olton, Birmingham. r.d.24

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JACK TICKELL.—For Queens, Stocks and Nuclei. List free. — Westbourne Apiary, Cheltenham. r.a.54

Orders booked now for April Stocks. Catalogues now ready. PEARSON & GALE, Marlborough.

PURE fertile imported Carniolan Queens, June, 9s.; send for list.—B. WOODLEY, Thorne, near Doncaster. r.d.57

LANGSTROTH HIVES. — Perfectly simple, simply perfect, international standard; as efficient in this country as elsewhere; make the bees pay; our speciality. All Accessories. Swarms of Bees. Finest Queens.—DICKINSON & OWEN, LTD., 25, Bartlett's Buildings, Holborn Circus, London, E.C.4. 'Phone, Holborn 824. Equipment in British sizes to special order. Illustrated Catalogue now ready, post free. r.d.35

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MIDDLESEX BEE-KEEPERS' ASSOCIATION. —A Course of six Lessons in Practical Bee-keeping will be given at the Model Apiary, S. Mimms. Inclusive fees: Members of the Middlesex Association, 7s. 6d.; non-members, 10s. 6d.—Syllabus and dates can be obtained from the HON. SEC., Middlesex Bee-keepers' Association, 23, Bedford Street, W.C.2. r.c.107

QUEENS by return from April till October.—PEARSON & GALE, Marlborough. w.14

BUCKFAST QUEENS are the very best. 1922 Circular and Price List sent free on application.—REV. BR. ADAM, Buckfast, S. Devon. r.b.81

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STRICTLY BUSINESS.—One dozen Flavine—S Powders, 1s.; a Japanned Sprayer, post free, 6s.; a Floorboard Feeder, to fit under any hive, 10s., post paid.—S. H. SMITH, 30, Maid's Causeway, Cambridge. d.36

THE ACARINE 1921 ECLIPSE PAD.—It knocks out mites and moths. Your money back if not satisfactory. Price 5s., post paid.—S. H. SMITH, 30, Maid's Causeway, Cambridge. d.37

BOOK NOW!—Choicest home-bred Carniolan Queens for 1922.—PEARSON & GALE, Marlborough. b.24

ADMINSON'S SEMI-COMBS.—Nuclei on these combs from mid-May at cheapest rates.—PEARSON & GALE, Marlborough. r.b.66

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'Phone: 2422. Tel.: "Sunflower, Cardiff."

PARCHMENT CONTAINERS, stamped "Fine Lemon Curd," offered at half price to honey producers who can affix labels over the printing, 1 lb., 4s. 9d.; ½ lb., 4s.; ¼ lb., 3s. 6d.; ⅛ lb., 2s. 3d. per 100. Also plain 2 lbs., 14s.; plain 1 lb., 9s. 6d. per 100. Add for carriage 1s. 6d. to each 5s. value ordered. Pure Honey for bee feeding, etc., 60-lb. tins, 50s. cwt., f.o.r. Terms cash. Samples 6d.

For FRAME MAKING.

The BOWEN WIRING BOARD will prove invaluable. It holds frames square and true while making and wiring, provides gauges for boring, lever to tighten frame while wiring, stand to open saw cut when inserting foundation and embedding boards. There are tins for holding the nails and the reel of wire is mounted on a spindle enabling it to be drawn out evenly without kinking. Saves both time and trouble. Send for one to-day. Price 6/-, postage 1/3.

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Manufacturers of Beekeepers' Supplies

Stroud Road, Gloucester.

Full Illustrated 1922 Appliance Catalogue free on application

THE SEASON WILL SOON OPEN, and bees, bee-keepers, and faithfully yours will be so busy that we won't know which way to turn. Have you ordered your Guaranteed American Beauty Queens yet? Better hurry! The first three weeks in May and the first week in June are already so full that I must withdraw them until I see how the season goes. By the way, while May, June and early July may be the best months for increase, I believe that late July, August and early September are the very best months for re-queening—besides queens are cheaper then, even my American Beauties. May, 12s.; June, 10s.; July, 9s.; August, 8s.; September, 8s.; and every queen guaranteed. Please order just as soon as you know how many you need. Here's hoping that the season is the best yet.—Faithfully yours, SKIPWORTH CANNELL, Aux Sièyes, par Digne, Basses-Alpes, France. r.d.28

THE British Bee-Keepers' Association.

Insure *now* against loss by damage done through bee stings. All particulars from W. HERROD-HEMPSALL, 23, Bedford Street, Strand, London, W.C.2.

PERFECT EFFICIENCY IN HIVES AND BEES.

Cleopatra Bees: Queens reared under natural swarming impulse breed the finest colonies. Stocks from 23/-
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THE THAMES VALLEY BEES (Regd.) TEDDINGTON.

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BREEDER OF **FAMOUS COTSWOLD QUEENS**
"Best in their Class." **HYBRID**
Art Booklet Explains. **BEES.**

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The Bee-Keepers' Calendar.

APRIL, 1922

27 Thursday. "How the bloom and the balm
And the bee and the bird,
In the depth of the wood,
To the heart bring a calm."
Clinton Scollard, "Wild Plum."

28 Friday. "Save here and there a scanty patch
Of primroses too faint to catch
A weary bee."—*Browning, "Paracelsus."*

29 Saturday. "But here will sigh thy alder tree
And here thy aspen shiver:
And here by thee will hum the bee,
For ever and for ever."—*Tennyson, "A Farewell."*

30 Sunday. "The lizards basking on the soil,
The butterflies who sun their wings;
The bees about their household toil
They live, they love, the blissful things."
Kingsley, "The Mango-tree."

MAY, 1922.

1 Monday. "Now all nature is alive,
Bird and beetle, man and mole;
Bee-like goes the human hive,
Lark-like sings the soaring soul:
Hearty faith and honest cheer
Welcome in the sweet o' the year."
Meredith, "The Sweet o' the Year."

2 Tuesday. Take means to prevent swarming or look out for swarms. Put on supers.

3 Wednesday. "A swarm of bees in May
Is worth a load of hay."

Review.

"Fruit Farming: Practical and Scientific," by C. H. Hooper, M.R.A.C., F.S.I. Second edition (bound in cloth board covers), price 6s.

Mr. Hooper is well-known to our readers through his researches and writings on the relation of bees to the pollination of fruit blooms, and many bee-keeper fruit growers will remember the first edition of this work as one of the most reliable text books on fruit growing. Mr. Hooper has a thorough grasp of the subject, and no fruit grower should be without this book. Not only does Mr. Hooper give the reader the benefit of his own wide experience, but there are special articles by many other authorities. There are fifty chapters and an appendix, everything connected with fruit-growing being dealt with, from how and what to learn, capital required, selection of site, the law in relation to fruit farms and market gardens to the marketing of the produce, and raising new varieties. The book has been brought quite up-to-date, with due regard to present conditions, and is copiously illustrated.

A Dorset Yarn.

"Hope springs eternal in the human breast."

Cold though it is to day, following a 90 mile gale on Saturday, April 15, the optimistic bee-keeper must deplore such a continued run of bad bee weather, when there is so much blossom close by the bees they cannot get out to it. Plums are in full blossom, many gooseberries are delightful to see, but only one day this last week were bees on them. Each day we hope will be better: lines of red currants are opening, the colour of the black one can be seen as the racemes show in the bunch of leaves; the ornamental one callen "*Sanguinea*" has been open some time. Bees can revel in this wealth of sweets, if only it will get warm enough for them to look for it.

We who keep bees hope that they will do well this year, as the milk from thirty cows is worth so little just now. The great combine of milk buyers offer about £7 per ton for it, when cakes to feed them are costing double, when haystacks are nearly used up, and the grass cannot grow as the nights are so cold. We are looking to the bees to give us a good harvest.

We need well remember the old promise, "Seed time and harvest shall not cease, as long as the sun and moon endureth." A near neighbour is already placing on sections that have a lot of stores in them left from last season; his bees were building on top of the bars some weeks ago. We are both singers in the same church; he is also churchwarden, and has to see the gifts of bread and cheese given away to the poor. An old parishioner, some hundred years ago, left a farm to the parish, the income to be divided into three parts, one part to apprentice a poor boy, one part to the parson to preach to them, one part for bread and cheese each Sunday to be given away on the steps of the old church cross. The farm has now been sold at the flood-time in farming, and the money invested in Government stock—it is nearly as much again in value as it was when only the rent of the farm came to pay the charity gifts. Mr. John Pike, as churchwarden, has to see that this charity is given away. The old stone cross has gone down as the years have passed away, but the steps that were at the base still remain. Above it just now in full blossom is a gigantic silver fir, the flowers of which are a bright crimson; beneath a glass they look like gigantic raspberries. At South Lychett Parish Church there is another gardener bee-keeper, who is also a chorister and churchwarden, as I daresay there are many others throughout our own loved land. I have always found that those who love Nature and all things beautiful, love all that is beautiful in the Christian Church. But I am digressing again from the text. All of us are hoping for better weather for our bees: "hope springs eternal in the human breast."

I placed on Thursday two brood boxes over the tops of two strong lots. Each day I have looked: one has had bees up at the top and one has not: beneath the felt covering the strip of glass is quite warm; each looked about the same in numbers, each had a lot of capped brood on the bars, and each had the centre of this brood with the cells empty, a proof that they were sending out young bees. If bees can give off heat enough for them to keep on the tops of standard bars and on the tops of sections, they must be doing well. During this last week bees are emptying capped sections, or the part in them that was capped over a week ago; they cannot get out for food, so they must of necessity use up a lot of stores to generate heat.

Visitors from Southampton bee-keepers came on Saturday to see the farm; all of them were optimistic, each had lost some stocks by robbing. Others are coming this week who are in Bournemouth for their holidays, and took the wise step of arranging when I can be home, as there are two meetings of the Dorset County Council in this week, one for education and one for agriculture.

One cannot be home to meet so many really nice people, with whom we have so many things in common. All adds to the pleasure of meeting bee-keepers from a distance.

We have the horse chestnuts unrolling

their flowers. Where they are sheltered from the cold winds they are very forward, but where exposed to the north there is a marked difference. All these trees are valuable to the bee-keeper—all make one think of the text, "Hope springs eternal in the human breast."

Now that the price of honey is falling it is high time something was done to co-operate and get the sections cheaper; 66s. 6d. per case of 500 is more than double the price before the war. Some firms offer a discount, but that is swallowed up in carriage. The bottles, 50s. per gross, or 5s. per dozen, is far too high when honey in jars only sells at 1s. to 1s. 3d. per lb. in the open markets. Many Dorset honey producers fill their empty jam jars and tie them down; the honey is good, and fetches about the same price in the Wimborne and Wareham markets, when one has to pay 5d. for each bottle, well one had better sell the honey for less in these used jam jars than buy such costly screw-tops. We must hope for better terms. "Hope springs eternal in the human breast."
—J. J. KETTLE.

[This yarn did not reach us until Wednesday, April 19, too late for insertion last week.—EDS.]

Jottings from Huntingdonshire

Beware of imitations! I am not the Rector of Steeple Gidding, but only his daughter. I think I had better tell you so at the beginning, because some might become so fiercely annoyed when they discovered they had been wasting their time over the scribblings of a youthful maiden, that they would die of apoplexy. I should not care to be the cause of any such unpleasant business, so I give the above-mentioned "some" a timely warning.

The last two days have been ideal, and yesterday I felt inspired, and offered to write these jottings, but alas! the only jottings the weather inspires within me to-day are "Pit, pat, pitter pitter pat (cres.), pish, plash, slash, pitter pash, etc." What of the poor bees, when they thought their day had come at last? Have they a "language"? Well, if it might be given us to understand it, I guess we should do better not to listen at the hives' mouths to-day.

Now I will give you a little information, but not off my own bat. I have been told it, and pass it on, i.e., The pollen is coming in freely, and nectar can be had in quantities, sufficient to convince H.R.H. Queen Bee that breeding may begin apace.

The country is very backward, to which remark some will be inclined to answer, "Queen Anne is dead." Anyway, that fact is still taught in schools, so forgive my remarking on the obvious. I am looking forward to the "great push," which must surely soon begin; when every day brings marked and delightful changes. The lesser celandines are very true to us; they lie thick over the meads. The daisies, too, are faithful creatures, they never fail; and these two wait to greet the bees when they have the ghost of a chance to get out. The ash trees are in bloom, and the oak buds are unfolding, which is most hopeful. That reminds me; dare I venture an opinion which the majority will no doubt call my bad taste? The young green of the oak always strikes me as being an ugly colour, and I am always glad when these leaves grow darker. Does *anyone* agree?

Did you know that bees are very partial to the paint box? Is it an insult to say "Did you know?" to "B.B.J." readers on the subject of bees? If so, all apologies. Yesterday, as I have already stated, inspired by the fine weather. I sat outside painting. I would be endeavouring to portray the clear even blue of the sky, gradually paling towards the horizon, when a bee would settle on my blue pan. Another would inspect from my forefinger, at a critical moment, and a third take a rest on my ivy-covered elm, whilst I waited with my brush poised in the air, and the paint on that and the tree on the paper rapidly dried up. Result: a nasty streak in the middle of the bark, which looked as if someone had set out to chop the thing in half and changed their mind.

That ravishing composition, "The Rain Drops," has now come to a "dim." passage, and has changed to the minor key. In consequence I have a hope that I may soon be able to put my nose out of doors, so will finish, seal, and stamp this epistle, and if I should see anything truly remarkable when I sally forth, I will return post haste, and write of it on the back of the envelope!

So adieu, and good luck to all bee-keepers for a flourishing season.—LOIS E. HEMMING, April 22, 1922.

Week-End Bee-Keeping.

(By S. H. SMITH, Cambridge.)

(*Continued from page* 190.)

There is only a slight swelling where that bee stung you, "D. B." Maybe you are one of the lucky ones who are practically immune to bee poison. There are many who suffer severely during several seasons and others who never become immune.

You can use your hands all right, and it is a pleasure to work with you. Yes; that steel bristle brush makes the propolis fly. Please save the débris to put into the smoker. The fumes seem to have a soothing effect on the bees.

Half-a-handful of soft soap dissolved in that bucket of hot water will make a fine cleansing fluid. We will scrub the brood chambers first, and then the hives.

No; it is not getting any warmer. Our fickle climate at this season seldom allows a full day's work in the apiary. No; we can not always stick to 70 deg. Fahr., anything from 60 deg. Fahr. up will do at a pinch. But we like to impress upon novices that too frequent manipulations are harmful, and the loud pedal on the high temperature note

sounds a useful warning. Only essential manipulations are admissible if you are going to run an apiary for profit.

No; I do not propose to go through any more stocks now. You must first thoroughly digest what you have seen and done. Besides, "D. B." you will have to report back at headquarters. Seldom do home partners look upon time spent with bees from the same point of view, and I do not want to get into the bad graces of Mrs. D. B., so we had best—goodness! You have brought your luncheon. Well! well! my apologies to your better half. That puts the matter in another light. It is only twelve o'clock now, so we shall have time to get these hives done, to take a look around the apiary and to talk bees to beat the band until it is time to eat. I'll set the alarm for one o'clock.

You are not only a good worker, "D. B.," but also neat and quick. The three hives and the six brood boxes are scrubbed as clean as whistles. Let us stack them up to dry in the sun and air. Now let us take a peep under the quilts to see if those treated bees appreciate their enlarged quarters.

My. Every comb is covered with bees, all working hard and enjoying themselves. And do you notice, "D. B.," that thrice as many field bees are leaving those three hives than are issuing from the other three yet untreated ones?

Why? Well, I will hazard a guess that the new work offered has stimulated the stocks to greater activity. The young bees have now a better chance to exercise their powers by the cleaning and repairing of those ten added combs than they had when crowded on the combs in the one brood box. They can now spread and move above any incoming nectar in thousands of extra cells. All this increased movement re-acts on the field workers, and they go out oftener and with greater energy to bring in their loads. And the very fact of their absence increases the comfort in the hive, and adds to the happiness of the bees. In consequence the whole stock braces up to meet the new conditions.

Come again, "D. B." It is by your questions that I can judge of your capacity to absorb bee data.

Hear that peculiar, shrill buzzing? There is an angry bee about. Look out! Pull down your veil, "D. B." Ah! there it is, trying to sting your coat sleeve. See those whirring wings, they are going at a rate of over 1,000 times a second. Now if the bee is cognisant of each movement at this high rate its perceptions must act as very microscopes of time and motion.

Just what do I mean by an "angry" bee? Let me fill and light my pipe. Are you trying to pull my leg, "D. B.?" Your pardon—I see you are serious—it is I who must mind my p's and q's.

We speak of "anger" in the consciousness of a bee, but we can conceive no idea of it.

Anger with us means quickened heart beats, altered breathing, muscular tension, increased blood pressure, etc. The circulation of a bee is totally different to ours or to that of any vertebrate. A bee does not breathe through lungs; its muscles are attached to the inside of its skeleton, and that skeleton is on the outside of the bee.

We cannot imagine one colour or one sound that we have never experienced. How then can we imagine the sensations of sense organs so radically different to any we possess?

The truth is "D. B." that none of us know much about the bee, and we are never likely to know much about its inner consciousness. Bees are guided by stimuli, instincts, and impulses we do not understand, simply because we do not possess the sense organs of the bee. Hypothesis fails when dealing with invertebrates?

We may and do learn a good deal about their habits and general behaviour. But mentally insects are as far apart from us as any possible inhabitants of Mars or other planet. If bees or Martians could speak we should never understand what they were talking about, as it would be impossible to interpret their language from our experience.

And how limited are our senses! Our ears can appreciate only about fourteen octaves in sound, and our eyes less than one octave in sight. Beyond those narrow limits are infinitudes, up and down, but for us only silence and the dark.

There goes the alarm! We had best stick to practical apiary matters, "D. B.," or we shall get nowhere. Come on, let us take our lunch baskets over to that row of tall sycamores. Behind them is a sunny, garden close, secluded and sheltered, an ideal spot to hear the summer call, and where we can discuss our next moves in peace and comfort.

(*To be continued.*)

Jottings.

April at this early stage, with its cold wind and snowstorms, has, so far, proved a set-back rather than a speeding-up towards the supering time, I suppose we are all looking forward to, as well as to the spring overhauling and general clean up, previous to this busiest and most interesting time.

The bees, too, find it tremendously trying, and many a poor little hard worker for the few moments of sunshine intervening has returned to the hive site, to lie exhausted, having missed the board. One feels that the temperature must actually freeze the "moist" little machine as soon as the wings stop, as I have seen several which seemed powerless to move, although the haven was reached. It is quite apparent what a great help to the bees a good flat extension to the alighting board is at this time. Of course, a goodly number have almost run their course at this time, and it behoves us to conserve every bee to help broaden the brood nest and secure a steady reinforcement of young spring bees.

Feeding.—This should be managed with caution at evening. For my part, where stores are in evidence I would not "force" the colony at all until a change of weather

conditions set in. Now is the time to use inferior sections, or other if they can be spared and have been kept in a warm place, as they make the best honey-moist and sweetest of "baits" for the new season's rack of sections when empty, besides yielding the very best natural food and form for feeding honey; a tiny hole in the first quilt, with an additional *Daily Mail* or two over the others. We look on this as our ally now, and the size and texture makes this paper especially adaptable for this purpose, and the bees will soon respond to any help from a real ally or bee-lover.

Unfortunately there are so many who love bees, but cannot distinguish the presence of store or otherwise at this time. I sometimes wonder if enough attention is paid to the small things relating to the contents of the brood combs, although so important, and whether these are sufficiently enlarged upon by our instructors, as this proves to be the stumbling block of all beginners, but while the bees can feed themselves, and conditions of temperature are right, everything is swimming (?)

I am still of opinion some scheme of competence certificate of elementary management should be acquired to justify the money spent through Associations, Councils, and what not, at this stage of the bee-keeping industry, before the prospective keeper commences, and this is consistent with our wishes and aims towards "Legislation for all."—A. H. Hamshar, April 8, 1922.

On Queenlessness.

In early spring there is often a brisk demand for fertile queens, caused by the frequent discovery that stocks that appeared all right when they went into winter quarters roll up queenless in spring.

The most obvious reason for this kind of mishap is the fact that queens are often allowed to run to the end of their allotted span, and in their weak state are unable to resist the rigour of winter, and die a natural death.

Again, a queen sometimes fails rapidly near the end of the season, and is deposed and ejected by her children when it is too late to raise another. I have observed several cases of this untimely deposition.

Now, neither of these misfortunes need happen, as a rule, if the apiarist would only exercise a reasonable amount of diligence in the calling whereto he has been called. A careful record of the age and parentage of every queen in the apiary is a condition absolutely essential to success. If the queen is weak or decrepit, you can do what you like, but success will never be yours. If, on the other hand, the queen is young, strong, and well bred, you may do practically what you choose, and the stock will grow and prosper by leaps and bounds.

If you put this proposition to the average bee-keeper he will generally agree with you at once. And yet how different is his practice! It is quite a common experience to go into the apiaries of even progressive bee keepers and find that they have but the haziest notion of the age, qualities and parentage of the queens that head their stocks. Generally, they can state from memory that certain stocks began as swarms from certain others, but whether the new stock was headed by the old or a young queen they are uncertain. Memory is at best a poor guide in such matters, and it is little wonder that when such conditions obtain there should be queenless stocks in the apiary in spring.

But probably the most frequent cause of this queenlessness is not the passive neglect of the apiarist, but his active carelessness. Stocks in early spring should be left quite severely alone; or if they are examined, it should be with the maximum of caution and skill. Above all, the apiarist should know exactly where to look for the queen if she is not to be seen on the combs, how to rescue her uninjured from the ball generally to be found somewhere on the floor, and how to reintroduce her to her home before she has become chilled. If he does not know this, he should not meddle with the stocks until the season is more advanced.

Some stocks are more prone to ball the queen in spring than others. I had one lot of Ligurians that did this every time the hive was opened. Why they behaved thus I cannot say. The queen was normal and laid well, and the stock was prosperous. Anyhow, it was accounted to them for something other than righteousness, and they were later suppressed.

The enthusiastic beginner will find it a great trial to be prohibited from examining his stocks as soon as they have begun to work in earnest. I know I did. There are so many things of which he wants to make certain. The queen may be dead, or the store exhausted, and unless something is done the lot will perish. And so the hive is opened, untimely, and where everything was all right, the desire to make it doubly so puts everything all wrong. The worst forebodings are realised. There is no trace of the queen on the combs; and so the over-zealous enthusiast closes the hive, hurries indoors, and, taking his fountain pen, indites an order to some queen-breeder for a fertile queen *by return of post without fail*—at a time of the year when it is utterly impossible to rear such a thing as a fertile queen in any part of England.—Hugh Horston, Sidcup, Kent.

(To be continued.)

Warwickshire Bee-Keepers' Association.

The forty-second annual meeting of the above will be held at the Grand Hotel, Colmore Row, Birmingham, on Thursday, May 4, 1922, at 7 o'clock, when the chair will be taken by P. J. Hannon, Esq., M.P., and after transaction of ordinary business a lantern lecture will be given by W. Herrod-Hempsall, Esq., F.E.I., on "Bees in Relation to Flowers and Fruit." All interested in apiculture are cordially invited, free of admission. — Jno. R. Ingerthorp, Secretary, Knowle, Birmingham.

British Bee-Keepers' Association.

The monthly meeting of the Council was held at 23, Bedford Street, Strand, London, W.C.2, on Thursday, April 20, 1922.

Mr. W. F. Reid presided, and there were also present :—Miss M. Whyte-Johnstone, Sir Ernest Spencer, Messrs. E. D. Lowes, G. R Alder, G. J. Flashman, J. B. Lamb, A. Richards, J. Herrod-Hempsall, Association Representatives E. Ff. Ball (Bucks), R. R. Babbage (Middlesex), C. D. Burnet (Twickenham and Thames Valley).

The minutes of the previous meeting were read and confirmed.

The following committees were elected :—

Finance. — Messrs. G. Bryden, R. R. Babbage, C. L. M. Eales, F. W. Watts, J. B. Lamb, E. D. Lowes, A. Richards, W. H. Simms and Sir Ernest Spencer.

Exhibition.—Miss M. D. Sillar, Messrs. G. R. Alder, E. Ff. Ball, G. Bryden, G. J. Flashman, F. W. Harper, J. Herrod-Hempsall and A. Richards.

Publication.—As last year.

Board of Examiners.—Messrs. G. R. Alder, G. Bryden, G. J. Flashman, J. Herrod-Hempsall, W. Herrod-Hempsall, W. F. Reid, A. Richards and W. H. Simms.

Emergency.—As last year.

Letters of regret at inability to attend were read from Miss M. D. Sillar, Messrs. F. W. Watts, E. Walker and C. L. M. Eales.

The following new members were elected : —Mrs. Spencer Arnold, Mrs. E. E. Cowles, Messrs. L. W. Bell, H. K. Springett, R. A. L. Harvey and R. Price.

The Berkshire Bee-keepers' Association and the Bishop Stortford Association applied for affiliation, and both were accepted.

The Kent Bee-keepers' Association sent in their resignation, and it was accepted.

The following Associations nominated representatives on the Council, and all were accepted : — Essex, Monmouthshire, Cornwall, Doncaster and District, Leicestershire, Devon, Middlesex, Sussex, Glamorgan, Bucks, Derbyshire, Staffordshire and Surrey.

The financial statement made by Mr. J. Herrod-Hempsall was as follows :—Payments into the bank for February, £32 8s. 9d. ; March, £49 12s. 3d. ; payments amounting to £57 1s. 7d. were recommended.

The Exhibition Committee reported as follows :—That arrangements be made to hold lectures and demonstrations at the Nations' Food Exhibition from September 6 to 26, 1922, and that an educational exhibit be made. This was agreed to.

British Empire Exhibition (1924).

The Sectional Committee be Messrs. W. F. Reid, A. Richards, G. Bryden, W. H. Simms and W. Herrod-Hempsall. This was agreed to.

That the annual exhibition of the Association be held at the Grocers' Exhibition, Royal Agricultural Hall, Islington, London, September 10 to 22, 1922 ; that the schedule be as last year. Judges : Messrs. J. Price and A. Richards ; reserve, W. E. Moss. This was agreed to.

The Examining Board submitted that as far as possible all preliminary examinations should be held by examiners from outside the county in which the examination is held.

A letter was received from the North Devon Association, and the Secretary was instructed to deal with same.

The conditions of affiliation were amended for reprinting.

Next meeting of the Council May 18, 1922, at 23, Bedford Street, Strand, London, W.C.2.

Middlesex Bee-Keepers' Association.

This Association, after a period of dulness, has determined to place itself again in the front ranks of progressive bee-keepers. To this end an active campaign for 1922 has been planned. The committee are seeking by every means in their power to advance the interests of their members, and will welcome suggestions from all interested to further this end.

Members, however, should remember that it largely rests with themselves to make the association a living concern. For by inducing other bee-keepers to join up, attending lectures and meetings, and making suggestions for improvements they can greatly extend the society's influence.

The Model Apiary will be opened for instruction in practical bee-keeping during the first week in May. Members can join these classes at a fee of 7s. 6d. the course. The committee hope this will be taken full advantage of. To those living in outlying districts it is arranged that if sufficient students can be found to form a class a qualified instructor will be supplied.

Lectures and demonstrations are to be given in various parts of the county, and advice will be freely sent by post if postage for reply is enclosed with inquiry.

It is also intended to form a library for the benefit of the members. The committee will gladly receive any books dealing with the subject.

Honey shows are also being arranged, particulars of which will be advertised in due course in the "B.B.J."—G. JAMES FLASHMAN, Hon. Secretary.

East Dorset B.K.A.

The annual meeting of the East Dorset branch of the Dorset Bee-keepers' Association was held on Saturday afternoon at the Boys' Council School, Wimborne. Business was preceded by a conversazione at 5 p.m., a good company being present, and there was plenty of talk on bees. Mr. George Habgood presided at the business meeting.

The Hon. Secretary and Treasurer (Mr. E. H. Garrett, of Broadstone), presented the annual report and balance-sheet, which were both regarded as very satisfactory, and were adopted. It was stated that during the year lectures and demonstrations at various places in the district had been given, and the use of the bee tent was much appreciated. Members had been assisted with their bees. The branch was in a flourishing condition with

83 members. After sundry payments, there was a balance in hand of £9 17s. 11d., compared with £6 6s. 6d. brought forward. Subscriptions received amounted to £18 5s., the receipts totalling £49 11s. 6d. The Earl of Shaftesbury was re-elected president, as were the vice-presidents, with the addition of Sir John Lees. Mr. Garrett was re-appointed hon. secretary and treasurer, cordial tribute being paid to his excellent services. Other re-elections included :—Executive, the Hon. Lady Hanham, Messrs. J. J. Kettle (Corfe Mullen), E. H. Garrett, J. Dance (Lychett Minster), G. Butson and S. Tomlinson (Wimborne); chairman of committee, Mr. G. Habgood; vice-chairman, Mr. J. J. Kettle; committee, Miss Hanham (Wimborne), Miss Smythe (Colehill), Miss Jenkins (West Moors), Messrs. Tite (Dudsbury), J. Bridle (Crichel), Knight (Verwood), Lawes (Chalbury), T. Owen (Gaunts), C. Griffin (Broadstone), Jenner (Lytchett Matravers), and Child (Lytchett Minster), to the list being added Mr. Cake, of Lytchett Minster, and Mr. M. Wheadon, of Upper Parkstone, in place of Mr. G. Bowles, removed from Poole. Messrs. Butson, Tomlinson, the Rev. E. Hayden (Pentridge), and the hon. secretary were appointed district visitors, the wish of the meeting being that they should visit every member at least once in the spring.

Mr. Kettle afterwards gave an instructive and entertaining lecture on bees. Dorset, he said, was rich in forest trees to provide abundance of honey. The wild flora of their neighbourhood, too, was rich in nectariferous flowers; it only wanted the stocks of bees to harvest the tons of honey, a rich food, which were wasted every year. The monthly Board of Trade returns indicate that they sent out of that country many thousands of pounds sterling for an article which was not nearly so rich as their own, which they let waste. Was that sound economy—to enrich other countries with their money for what they could harvest for themselves? They must produce more if they wanted to make their land richer and their people more contented. The lecturer pointed out that woman, as well as man, could handle bees with success, and bees did a great deal of good to the owner besides collecting honey; for instance, they fertilised their apples and pears, plums and cherries. Many of their best varieties would never have any fruit at all unless bees fertilised the blossoms. Those who kept bees were the greatest benefactors to the neighbourhood, as they pollenised all fruit trees as well as their own. Mr. Kettle also told the audience, in a humorous way, the songs of the bees. His lecture was much appreciated.

(*Communicated.*)

Trade Catalogues Received.

S. A. Bradbury, Seed, Bulb and Bee Appliance Specialist, 29, *North Street, Taunton.*—Mr. Bradbury can supply seeds of plants suitable for bee-keepers as well as bee-keeping appliances, and also undertakes to attend to apiaries. A very complete stock of appliances is listed, and two pages of useful hints to beginners given.

Dickinson & Owen, 25, *Bartlett's Buildings, Holborn Circus, E.C.*4.—This firm make a speciality of Canadian and Langstroth hives and equipment, and several appliances not listed in other catalogues will be found in this.

J. E. Pinder, Central Stores, Market Place, Salisbury.—A neat, well illustrated list. Mr. Pinder, in addition to supplying all necessaries for bee-keeping, is open to give instruction in their use. A monthly calendar of operations is given, which will be found useful, though in several instance the instructions might be clearer.

J. L. Tickell, Westbourne Apiary, St. Mark's, Cheltenham.—Mr. Tickell's list, though small, includes all the necessaries for bee-keeping; stocks, nuclei and queens are a speciality.

Questions, &c., for Bee-Keepers for Self-Examination.

651. Apart from gathering nectar and pollen, what work is done by worker bees?

652. What conditions favour the production of nectar in flowers?

653. Given a dead bee, how would you most readily determine with certainty whether it is a drone, a worker bee, or a queen?

654. What influence has the cessation of a honey-flow upon egg-laying? Explain.

655. If two after-swarms fly together and form one cluster, how may the two be separated?

656. Compare the use of 1-lb. sections with that of 2-lb. sections.

J. L. B.

Bee Shows to Come.

May 24-27 at Guildford.—Surrey B.K.A. Show. Two Challenge Trophies, Apis Club Silver Medal, B.B.K.A. Silver and Bronze Medals and Certificate, Surrey B.K.A. Silver and Bronze Medals, Open Classes Honey, Wax, Appliances, etc., Demonstrations, Lectures, etc.—Hon. Secretary, W. E. Hamlin, 43, Norbury Court Road, Norbury, S.W.16

June 7 and 8, at Chelmsford.—Essex B.K.A., in conjunction with the Essex Agricultural Society's Diamond Jubilee Show. Apis Club's Silver Medal, Essex Agricultural Society's Silver and Bronze Medals, and also the B.B.K.A. Medals and Certificate, besides many prizes. All Classes Open. Lectures and Demonstrations on both days in the Bee Tent by the County Bee Instructor.—Schedules and Entry Forms from Secretary, Essex Bee-keepers' Association, Rawreth, Wickford, Essex. (Stamped, addressed envelope, please.)

Royal Show, Cambridge, July 4 to 8.—Over £40 in prizes. All classes open.—Schedules and all information from Mr. E. C. R. Holloway, Burwell, near Cambridge. **Entries close May 20.**

July 26-27, at Cardiff, Sophia Gardens.—Glamorgan Bee-keepers' Association, in connection with Cardiff and County Horticultural Society's Show. Open Classes. Special prizes: Taylor's W.B.C. Hive and Apis Club Bronze Medal.—Schedules from Secretary, Chas. F. Davies, 5, Borstal Avenue, Cardiff.

September 16 to 22.—British Bee-keepers' Association Annual Show at Grocers' Exhibition, Royal Agricultural Hall, Islington, London. Schedules from Hon. Secretary, B.B.K.A., 23, Bedford Street, Strand, London, W.C.2. **Entries close certain September 4.**

Special Prepaid Advertisements.

One Penny per Word.

Advertisements must reach us NOT LATER than FIRST POST on MONDAY MORNING for insertion in the "Journal" the same week.

PRIVATE ADVERTISEMENTS.

WILL Advertiser, Box 60, kindly send address, which has been mislaid?

SURPLUS SWARMS, Italians, 8s. lb.; cash orders in rotation; May and June.—OSBORN, Glenfield, Bideford. d.58

HYBRID ITALIANS.—A few surplus Stocks, very prolific, good workers, gentle; 10 frames, £4; box to be returned.—Box 62, B.B.J. Office, 23, Bedford Street, Strand, W.C.2. r.d.59

FOR SALE, Bees, two stocks, four Hives, one W.B.C., Extractor, Cowan pattern, geared Appliances, etc. Offers. Reasons for sale, moving to town.—CHAPMAN, Estcourt, Heene Road, Worthing. d.60

SIX HIVES OF BEES, all strong, healthy, Hybrid Italian, 9-frame Stocks in good hives, carriage paid, £4 each; leaving the country.—BONNER, Freshford, Bath. d.61

MAN wanted to work in nursery, with knowledge of bee-keeping. State particulars and wage expected. — ALLAN, Nursery, Newton Stewart. d.62

REDUCING APIARY.—Strong Stocks, Italian and Italian-Black Bees from 50s. to £5. Hives and Appliances, Sections, Racks, Skeps, etc. Send for list.—SIMMS, 81, Bushey Grove Road, Watford. d.63

WANTED, Extractor; must be free from rust. —Particulars and price to BLACKBOURN, Wootton, Kent. d.64

BEES.—Italian Swarms from immune strain; free from disease; guaranteed healthy; May-June, 25s.—W. YOXALL, Oaken, Wolverhampton. d.67

FOUR STOCKS of Hybrid Bees, with Hives, for Sale, all in good condition, three Hives, Taylor's W.B.C., £12 the lot, or would sell separately.—J. RIDER, The Cottage, 33, Putney Hill, S.W. d.68

THREE strong, healthy Stocks Bees on 10 frames, 1921 Queens, complete with Hives, £12 lot.—NICHOLAS, Markyate, Dunstable. d.74

1¾ CWT. HONEY, finest Suffolk. What offers? —SPRATT, Grove Form, Occold, Suffolk. d.75

SALE, healthy Italian Hybrid Bees, Hives, Appliances. Particulars, stamp.—May be seen STUBBS, 117, Brunswick Park Road, Wednesbury. d.76

SURPLUS STOCKS for Sale, 8-10 frames, Italian Hybrids, 1921 Queens, from 70s.; also few spare 1921 Queens now available, 12s. 6d. each.—HOSEGOOD, "Beecot," Cliff End, Purley, Surrey. d.77

HAVE a few more strong, healthy English Stocks on standard frames, wired combs, wintered on own honey, splendid workers, £3 8 frames, £3 15s. 10 frames; box 10s., returnable. —MAYES, Bennington, Stevenage. d.79

2¼ CWTS. of pure Essex Honey in tins, 28 lbs. £2, 1 cwt. £7 15s., the lot £17. Also strong, healthy Stocks in good Hives, £5 5s. each, or near offers; carriage paid for cash with order.—TUNMER, The Apiary, Maldon. r.d.94

FOUR 28-lb. tins Honey. Offers wanted.—J. H. RUMBALL, 35, Benslow Lane, Hitchin, Herts. d.78

SELL a Lee's 12-frame W.B.C., second-hand, one lift and one shallow frame, supers, 30s.; disease free; carriage forward.—Box 65, B.B.J. Office, 23, Bedford Street, Strand, W.C.2. d.97

CAN accept orders for a few May and June Swarms.—A. W. DENNY, Godstone, Surrey. a.95

SELL Bee-keeper's Outfit complete or separately, two W.B.C. Hives, quantity Racks, etc., Extractor, Ripener, all Accessories.—FARRELL, 8, St. Mary's Grove, Barnes. r.d.41

65/-.—TWO only strong Stocks Bees, 10 frames; guaranteed healthy; approval; overstocked.—W. HUNT, The Croft, Somerford, Christchurch. d.45

SWARMS.—Book now! Hybrid Italians, 30s. Original stock from Lincs. Association Restocking Scheme. Inspection of stocks invited, Sunday excepted. Box 5s. extra, returnable.—R. C. SILVERWOOD, Bottesford, Notts. r.d.46

SWARMS from healthy Stocks, May and June, 25s., carriage paid. Cash with order.—ELLIOTT, Fredericks Road, Beccles. r.d.52

NATURAL healthy Italian Swarms, 30s.; second, 25s.; package returnable.—CADMAN, Codsall Wood. r.d.55

BUNGALOW, furnished, to Let until October 23, 1922; two bedrooms, living room, hall, etc.; very large garden with good fruit trees. Bees and Hives are established, and can be arranged about.—Apply, G. Bryden, 46, Star Hill, Rochester. r.d.51

OVERSTOCKED.—Six 8-frame strong Dutch Colonies, 1921 Queens, all wintered, guaranteed free from disease, April delivery, £3 each, carriage paid; boxes 10s. extra, returnable; bargain.—MRS. SMART, The Nook, Bures, Suffolk. r.d.58

12 (ONLY) ITALIAN 6-FRAME STOCKS, immediate delivery, almost ready to swarm, 45s.; guaranteed healthy; twice as cheap as nuclei; travelling boxes 10s. extra, returnable.—J. YOUNGER, 16, Maid's Causeway, Cambridge. r.d.62

HAVE A FEW more strong Stocks Hybrids on six standard frames, wired combs, 1921 Queens, good working strain, for April delivery, 50s., carriage paid.—WM. CHANNELL, Grove Apiary, Histon, Cambs. r.d.63

IN CONSEQUENCE of the Herefordshire County Council giving up their Restocking Scheme, the Apiary is for disposal. Italian Hybrids, all good, healthy 10-frame Stocks, all 1921 Queens, either with or without hives, without hives sent in special travelling box carriage paid to nearest station, 70s.; box charged 10s. extra, which will be returnable and cash allowed when received. Also 200 drawn-out Shallow Combs, 1¼ top bars, perfectly healthy, 18s. 6d. per dozen, carriage paid. Orders booked in rotation. Cash with order.—J. ARNFIELD, Arncroft, Breinton, Hereford. r.d.17

SELL.—Rotax all-brass Motor Car Head Lamps, self-contained acetylene, very powerful, 30s. the pair; two small powerful Acetylene Brass Head Lamps, with separate generator, suitable light car or cycle car, £3 the set; Austin Rear Wind Screen, mahogany framework, £7; Mills' Automatic Acetylene Generating Plant, suitable for 10-roomed house, £6; quantity of Acetylene Gas Brackets and Chandeliers, prices with particulars; small folding Magic Lantern, 30s.; single barrel .410 Gun, 30s.; motor cycle all-rubber Ponco, reaches to ankles, wind- and weather-proof neck and sleeves, 50s.; all carriage forward.—HERROD-HEMPSALL, Old Bedford Road, Luton, Beds. c.77

I WILL EXCHANGE new Villiers' 2-speed Motor-Cycle for bees; a beautiful machine, costing nearly £70.—WYATT, Bishopswood, Chard. d.65

SEVERAL Stocks of Italian Bees, headed by Bozzala-Bowen's or Adminson Queens, on 8, 6 or 4 frames, at 65s., 50s., 41s., carriage paid; cash with order; returnable box, 10s.—MYTTON, Lyncroft Apiary, Stafford Road, Lichfield. r.d.48

TWO STRONG STOCKS, 70s. each; two Nuclei, 40s. each; box 10s., returnable; all from apiary that produced over 100 lbs. honey per hive last season.—BROWN, Beechwood, Wantage, Berks. d.88

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THE WISE BEE-KEEPER looks for quality. The South Hampshire Apiaries breed only from the very best strains. Result: Quality and satisfaction. Beginners' Outfits from £5.—All communications, H. E. NEWTON, New Milton, Hants.

PRICES TEMPORARILY REDUCED.—Choicest Italian Queens, May 8s. 9d., June 7s. 9d., July onward 7s.; reduction for ten; safe arrival guaranteed.—HULBERT, "Châlet," Warwick Road, Olton, Birmingham. d.70

FINEST ITALIAN NUCLEI, with Cannell's imported 1922 American Beauty Queens; satisfaction absolutely guaranteed; May, 3-frame 45s., 4-frame 55s.; June, 40s. and 47s. 6d.; carriage paid; travelling boxes returnable.—HOGAN, Boxford, Suffolk. d.71

THE 1922 15-frame "Thames" Hive for 28s. r.d.72

FINE, healthy, vigorous, natural-reared "Cleopatra" Stocks from THE THAMES VALLEY BEES (Regd.), Teddington. r.d.73

STOCKS genuine Swiss Bees for Sale. Write for Descriptive Circular. — DAVIDSON, Forest Road, Burton-on-Trent. c.195

SWARMS BOOKED, May delivery, Italian, Carniolan, Dutch; low prices.—DAVIDSON, Forest Road, Burton-on-Trent. c.198

STRONG STOCKS healthy Dutch Bees in Skeps; reduced prices; immediate delivery. Write actual importer. — DAVIDSON, Forest Road, Burton-on-Trent. c.196

ITALIAN, Carniolan and Hybrid Stocks and Nuclei for Sale, strong and healthy, delivery April, May, low prices.—DAVIDSON, Forest Road, Burton-on-Trent. c.197

NUCLEI.—A limited number of 3- and 4-frame Nuclei for disposal, Hybrid Italians, healthy; 3-frame, £2; 4-frame, £2 10s.; June delivery; travelling box 10s. 6d., returnable.—Box 65, B.B.J. Office, 23, Bedford Street, Strand, W.C.2. d.65

ADVERTISER, practical bee-keeper, with small established apiary in exceptionally good honey district, desires active or sleeping Partner able to invest £150-£200 to develop same.—Full particulars on application to Box No. 64, B.B.J. Office, 23, Bedford Street, Strand, W.C.2. d.87

SIX, eight, and 10-frame Stocks, packed with brood, bees, and young fertile Queen.—HARVEY, Apiarist, Andover.

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ITALIAN QUEENS, "Mellona" strain, home-bred for producing strong, healthy, non-swarming stocks and bountiful honey harveste, 10s.—Obtainable only, MISS PALING, Golden Square, Henfield, Sussex. Vacancy for Pupil. r.d.85

DUTCH, ITALIANS, HYBRIDS. — 6-frame Stocks, 45s.; 4-frame Nuclei, 35s.; Swarms, 25s.; May delivery; carriage paid.—LEE, The Beeman, Burgess Hill, Sussex. r.d.69

HARDY PROLIFIC ITALIANS (Penna strain), every colony wintered, 3-frame Nuclei with 1922 Queen, 35s. each, carriage paid; 5s. extra for box, returnable; additional frames 8s. 6d. each.—ERNEST BLISS, "Ranmoor," Dunstable, Beds. d.91

IMPORTED ITALIAN QUEENS, Penna or Tortoras, 9s. 6d., from May 14. Nuclei, 3-frame 35s., 4-frame 45s., headed imported Queens, May delivery. HENSLEY, Luton Apiary, Chatham. d.92

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PURE FERTILE Imported Carniolan or Italian Queens, May 15, 9s. 6d. Discount for quantity.

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Authoritative Articles on Standardised Hives, Acarine Disease, the Carniolan Bee, Bee-keeping in Germany, Combless Packages, Scientific Breeding, Marketing Honey, Grafting; also Press Extracts, Reviews of Books, Letters to the Editor, Modern Inventions, the Bee Laboratory, and numerous other attractions. 36 pages, 19 illustrations, 10½d., post free from "B.B.J." Office. Back numbers comprising the current volume can also be obtained. Don't miss your opportunity. d.93

TALKING BEES.—Tickell's Bees speak for themselves. Queens, Stocks, Nuclei. List free. r.d.49

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ITALIAN HYBRIDS.—Stocks, 5 frames 35s., 10 frames 65s.; box 10s., returnable. Exchange pure Runner Ducklings.—ERNEST GRIFFITHS, Helsby, Cheshire. r.d.39

GOLDEN ITALIANS.—These superior British-reared Queens require no recommendation; Goldens, 10s. 6d.; Three-bands, 8s. 6d. each.—COOMBER, 64, Ronald Park, Westcliff-on-Sea. d.47

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BEES FROM HOLLAND.—The best Dutch Stocks offered in original skeps (in crates of six skeps); moderate prices. Price List on application.—HENK v. LANGEVELD, Gasthinsringel 42 Rood, Haarlem. r.d.56

WE CAN STILL BOOK just a few more Stocks and Nuclei, highest grade pure Italians. A satisfactory deal guaranteed. — WELSH BEE GARDENS, Brecon. (Proprietor, Lieut.-Colonel Weaver Price.) r.d.44

STRONG 10-frame Stocks Italian and Italian Hybrids, healthy, April-May, 75s., carriage paid; Hive, 20s.; box 10s. extra, returnable.—CLUBB, Cranston, Sudbury, Suffolk. r.d.61

STOCKS, good, healthy, on standard frames, £3 3s. each; 10s. deposit on box, returnable. Cash with order.—MOORHOUSE, Rothwell Haigh, near Leeds. r.d.50

GRAFTON BEES AND QUEENS are good as money can buy. Early Nuclei, guaranteed the very highest grade, 3-frame, £2; 4-frame, £2 10s., carriage paid.—All particulars, MASOM & HEDLEY, Grafton Regis, Stony Stratford. d.89

PURE fertile imported Carniolan Queens, June, 9s.; send for list.—B. WOODLEY, Thorne, near Doncaster. r.d.57

LANGSTROTH HIVES. — Perfectly simple, simply perfect, international standard; as efficient in this country as elsewhere; make the bees pay; our speciality. All Accessories. Swarms of Bees. Finest Queens.—DICKINSON & OWEN, LTD., 25, Bartlett's Buildings, Holborn Circus, London, E.C.4. 'Phone, Holborn 824. Equipment in British sizes to special order. Illustrated Catalogue now ready, post free. r.d.35

MIDDLESEX BEE-KEEPERS' ASSOCIATION. —A Course of six Lessons in Practical Bee-keeping will be given at the Model Apiary, S. Mimms. Inclusive fees: Members of the Middlesex Association, 7s. 6d.; non-members, 10s. 6d.—Syllabus and dates can be obtained from the HON. SEC., Middlesex Bee-keepers' Association, 23, Bedford Street, W.C.2. r.c.107

QUEENS by return from April till October.—PEARSON & GALE, Marlborough. w.14

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White Candy—4 lbs, 5/- post free; 10 lbs, 11/- post free. Glass top boxes (2 lb.), 4 lbs. 5/- post free.

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ITALIAN, fertiles, April 12s., May 10s. 6d.; 4, 38s.; 6, 56s.; 12, 96s. Special quotations 25 to 100.—ATKINSON, Fakenham. r.d.42

ITALIANS, Nuclei, 1922 Queens, 3-frame, May 40s., June 32s.; Colonies, 6, 8, 10 frames, 50s., 62s., 73s.; returnable crates.—ATKINSON, Fakenham. r.d.43

DUTCH BEES.—4-frame Nuclei, £2 5s.; Italian, £2 5s.; splendid cross of Dutch-Italian Hybrids, £2 10s.; May-June; carriage paid; cash with orders. You cannot buy better bees. Many letters from well-satisfied customers for previous years.—SEALE, Ashley Warren, Oatlands Chase, Walton-on-Thames, Surrey. r.d.85

BRITISH GOLDENS for beauty, hardiness, industry.—3-frame Nuclei, £2; 4-frame, £2 7s. 6d.; delivered May and June. Book now, 10s. with order, balance when ready. Boxes charged 10s. unless returned.—F. M. FALSHAW, Avondale, Stocton Road, Guildford. r.d.46

CARNIOLANS.—If you want superior Honey Queens, 10s., Nuclei from 45s., bred by an old-established honey producer, book now.—SWAFFIELD, Libertus Villas, Cheltenham. r.d.23

PENNA QUEENS.—Please note precise address: ENRICO PENNA, Casella Postale 178, Bologna, Italy. r.c.141

JACK TICKELL.—For Queens, Stocks and Nuclei. List free. — Westbourne Apiary, Cheltenham. r.a.54

"WIGHT" AND "ACARINE" DISEASES.—Prevention and removal; invaluable advice; 5s. 6d. "An eye-opener."—ALF. RYALL, 8, Ospringe Road, N.W.5. r.c.87

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DUTCH BEES.—Send for my artistically Illustrated Catalogue outlining my method of managing bees profitably. Read my notes on Queens and Queen Rearing. Will interest the expert and amateur. Free for the asking.—WHYTE, Bee Farm, Cumbernauld Station, Dumbartonshire. r.b.32

STRICTLY BUSINESS.—One dozen Flavine—S Powders, 1s.; a Japanned Sprayer, post free, 6s.; a Floorboard Feeder, to fit under any hive, 10s., post paid.—S. H. SMITH, 30, Maid's Causeway, Cambridge. d.36

THE ACARINE 1921 ECLIPSE PAD.—It knocks out mites and moths. Your money back if not satisfactory. Price 5s., post paid.—S. H. SMITH, 30, Maid's Causeway, Cambridge. d.37

BOOK NOW!—Choicest home-bred Carniolan Queens for 1922.—PEARSON & GALE, Marlborough. b.24

ADMINSON'S SEMI-COMBS.—Nuclei on these combs from mid-May at cheapest rates.—PEARSON & GALE, Marlborough. r.b.66

Orders booked now for April Stocks. Catalogues now ready. PEARSON & GALE, Marlborough.

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(A SQUARE DEAL)

We are HONEY PRODUCERS, not bee dealers.

The Stocks we offer you are HEADED by THEIR OWN QUEENS, except as stated below. They are good stocks of bees on well pinned frames ensuring safe arrival, combs well wired, electrically embedded on full sheets of Weed foundation, just THE STOCKS YOU LIKE TO RECEIVE.

10	frame Italians headed by their own 1921 Imported Italian Queens	71/-
10	,, ,, ,, ,, 1922 Imported Italian Queens	75/-
5	,, ,, ,, ,, ,, ,, ,,	40/-
10	,, Hybrid Italian stocks with their own 1921 Queens	68 6
5	,, ,, ,, ,, ,, ,, ,,	39 6

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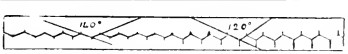
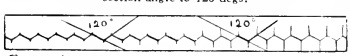


From a plaster cast of an ordinary comb foundation showing the flat angle of 140 degs. At the right the bees have built it out, thinning the base and changing the cross-section angle to 120 degs.



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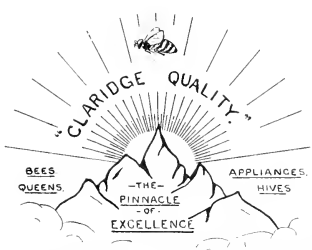

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The Bee-Keepers' Calendar.

MAY, 1922

4 Thursday. "Then the hurry and alarm
When the bee-hive casts its swarm."
Keats, "The Realm of Fancy."

5 Friday. "So when you see them streaming forth, a swarm,
And swimming up through summer's liquid blue
To star-land; when before your charmed gaze
Their dark host lengthens out upon the wind,
Watch them: they always make for leafy bowers
And running waters."—*Virgil, Georgics, Book IV.*

6 Saturday. "'A swarm of bees in May
Is worth a load of hay,'
So keep your skeps out handy,
Or else they'll get away.
Blue sky full of fair winds,
Meadows full of sweetness,
Gardens all a-blossoming—
Your bees may get away!"—*E. S. F. (B.B.J., July 5, 1917).*

7 Sunday. "All nations compassed me about: they compassed me about like bees; they are quenched as the fire of thorns: for in the name of the Lord I will destroy them."
Psalm cxviii., 11, 12.

8 Monday. "Clash cymbals too and make your kettles ring."
Virgil, Georgics, Book IV.

9 Tuesday. "It may be a dumb hidden yearning,
Some urge of which you are partaker,
That makes you, O Queen, a forsaker
Of the fragrant hive, dusky and dear.
You have left the old home in the keeping
Of princesses quietly sleeping,
While you, when your scouts come returning,
Must journey o'er woodland and mere."
Grace Allen, "The Swarm" (from Gleanings).

10 Wednesday. "They say that swarming wild bees seek
The hive at her command."
J. G. Whittier, "The Witch of Wenham."

Review.

Langstroth on the Hive and Honey Bee, revised and rewritten by C. P. Dadant (published by *The American Bee Journal*, Hamilton, Ill., U.S.A.). Since the death of C. Dadant in 1902, with whom he was associated in revising Langstroth's classic book, the work of revision has fallen entrely on C. P. Dadant, and in this edition there is recorded the most recent improvements and advances made in the science of bee-keeping. Mr. Dadant has found it necessary to re-write some parts and add new matter to bring the work up to the level of modern progress, more especially upon the question of bee diseases, as much advance has been made in the knowledge concerning the bacteria of the apiary. The book still retains as much as possible of Mr. Langstroth's writings, and new matter has been intelligently interwoven with them. A good feature of the book is that it does not recommend the numerous fads which too often prove a delusion and a snare. The reviser says: 'Experienced bee-keepers will notice that we do not describe many new implements. It is because we believe in teaching beginners to use only that which has been tested and is unquestionably good. Many new things will not stand the test of long years of practice. It is sufficient, among other things, to quote metal corners for frames and the reversible hives. Metal corners were recommended at the time of our first revision, and we gave them a mention; they are now discarded even by their inventor. Reversible hives were a craze, and were praised in every way. Reversible hives are now almost entirely abandoned.'' Referring to metal corners, we see that on page 273 Mr. Dadant has retained the illustration of the Cowan double-walled hive, which is credited as taken from Cheshire, and which shows Novice's metal ends and corners. This illustration was copied by Cheshire from an early edition of Cowan's British Bee-keepers' Guide Book. When, in 1882 the standard frame was adopted, metal corners were discarded, and have not been in use since that date. Mr. Dadant is well known as an authority on bee-keeping, and this new revision shows the painstaking care with which the edition has been done. The work consists of 438 pages, and is fully illustrated, there being no fewer than 218 figures in the text, besides a number of plates and portraits of bee scientists. We wish the work the same success that previous editions have had.

A Dorset Yarn.

"The light which we have gained was given not to be ever staring on, but by it to discover onward things, more remote from our knowledge."

The light, or knowledge, we have gained about bees is a great source of pleasure to us always. We are still trying other ways of getting surplus honey; two of the brood boxes which are placed over the strong stocks have the bees always up to the top of the bars, the other one only has the bees up on top when the days are fine and warm. We have some hives that have tarred roofs; these have far more bees over the tops of sections than have the white ones. The sun on the black roofs makes the interior much warmer; bees cannot get on with the work of the hive unless there is plenty of warmth. This shows that though black roofs make for excessive heat in summer, they are helpful in the early months when there is so little sun. Bees are upon the tops of bars and sections because it is warm; the sun makes the air space in the outer case so warm that it makes the felt covering warm and bees can more easily keep up the warmth of the hive. Many of these are young bees which had never yet been out of the hive.

Taking off the cover of one lot, one could see they were well clothed with down; on turning this wood and glass cover the wrong way up in a sloping manner from the ground to the alighting board, these young bees did not readily run into the hive as older bees would do, and I had to brush them off at the entrance. Some were put on the top again, as after being brushed off they did not enter for some time. The large amount of empty cells is a proof that bees are maturing at a rapid rate. I have only looked at a few of the strongest stocks, but all looks well for increase. Where the rack of sections was over the brood nest, the young brood in the centre bars was close up to the top. One bar had only two to three lines of stores above, and these were uncapped. There was no new surplus in the sections, last year they had begun sections in the last week in April, but this year all flowers are late and the weather has been against the bees, though they are making up for it as the days get warm.

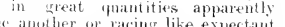
The light we have gained with bees as year after year goes by is considerable, but each year some new phase of their habits and economies is brought before us. A week ago three parts of the bees were carrying pollen; last week it looked as if it was entirely reversed, the pollen carriers were in the minority. It must be the goose-

berries, yet books tell us there is an adhesive pollen in these small flowers. Perhaps its colour was the reason it was missed being seen. Most pollen colours are easily detected as bees enter the hives. As so many nectar-producing flowers are open now, we expect that honey will be more freely brought in.

Our bees have now close to them plums, peaches, and cherries, with two or three varieties of pears, red currants, and gooseberries, the latter having the most bees—seven acres close to one lot of bees, two acres with another lot, and five acres with a lot half a mile away from the farm. All this is on our own farm, and other people's orchards are free to the bees. With the wild flowers close by in pasture fields and waysides there is no lack of honey-producing flowers.—J. J. KETTLE.

Jottings from Huntingdonshire

Most of us who live where Nature lives have experienced those days that seem to lave our very souls. Such a fine day is to-day. The sun bathes the whole countryside with golden light, and imparts a genial warmth to one's being. A murmuring breeze catches up the perfumes of poplar and aspen, dandelion and celandine, blackthorn and ash, and mingling them with the aroma of the larch and pine, the arabes and the fruit blossoms compound a scent which to breathe gives life. One stands erect, and opens one's lungs and draws in the air which stirs the blood like enriched wine robbed of its intoxicating power. The cuckoo and the swallows, both of which arrived on Good Friday, are adding to the joy of the day. While the lark rises to sing at heaven's gate the mavis sings on the apple bough; the blackbirds trill in the elm trees, while the ash trees are a dwelling for the linnets and the finch. The cooing of the turtle dove is all that is needed to soothe the mind. How one wishes on days like this there were no towns, no ceaseless roars, endless dust, smoke-laden atmospheres and the jangling of men and things of men. Needless to say the bees have caught the spirit of the day, and the myriad flights so constant and so vigorous create a symphony no musician could describe. As one opened hive after hive the same tale was told—progress. Just sufficient bees are left within to care for the brood and guard the portals, the rest are out. How they go and come! Tumbling one over the other in their haste to be at work. The hive entrance is extended, and they are grateful.

Young bees are rushing about on the alighting board "fearing to launch away," a push from an elder sister and they take wing, and after taking their bearings follow the track of the older bees to orchard and wood. The woods are their chief joy, for within are blackthorns smothered with blossom, milky white, and medlars, too, calling the honey flies to come and fertilise their blooms, offering nectar rich and sweet by way of reward. I have been watching the bees in their journeys to and fro. Their sinuous flight is more pronounced when you see them in great quantities apparently chasing one another or racing like expectant boys to get there first. Can the compositor illustrate it thus 
Left, right, left, right, even distances, then a rapid dart off to the left, and as rapidly back to the right, and then a similar process over and over again. Why these sudden deviations? I think I know; to outwit the watchful eye of any bird which may be on the look-out for a meal which would be both sweet and meat.

As far as the brood chambers within the hives are concerned there is room for storage, the lower combs being by no means full, yet withal the supers are not neglected on a day like this. There is hope that such weather may continue for many days. We shall not then be at a loss of sections and shallow frames for the early shows. I have just been looking at some capping in a Carniolan stock. How beautifully it is done. The Dutch, too, cap in a way that must put Italians to shame. I hope to be able to exhibit samples of various cappings at our county show, but while "Hope springs eternal" one must perforce wait, a month is a long time to bees if the weather is good, but if many bad days come along, much is consumed, and little or none comes in to take its place.

I see the white thorns are heavy in bud, and the winter beans on the point of opening their first flowers, so I have no fear if the sun reigns supreme during the month of May. At the moment very few drones are a-wing, and so far as I have been able to ascertain in none of my colonies have drones been kept through the winter. Although I have related in these columns how in other years I have found a few drones have been retained in some stocks from autumn to spring I do not propose to deal with the matter now. I have formulated opinions as to the why and wherefore of this, and later on shall have more to say on the subject. Furthermore, I shall have to wait awhile before I can say how long a drone bee will live if he be left unmolested by his sisters. Strange as it may sound, a drone, while easy enough to mark, manages to get clean more quickly than a worker-bee. One can put a tip of paint on a worker-bee and watch that bee's antics for two or three days. Try the same on a drone, and the chances are the next day the paint will be almost completely removed. Worker-bees no doubt clean him; but why they do not also clean a sister so treated can only be explained by the chivalry shown to the male sex in the hive until such time as affection turns to hatred, or whatever may be the apial equivalent for hate.

Now the day is passing the sun descends to the west, the suggestion of crimson already foretells another day of sun on the morrow. April is passing, and May with her wealth of flowers will soon be here. The month of swarms and nuclei forming, truly a great month for the bees.—E. F. HEMMING, Steeple Gidding.

Week-End Bee-Keeping.

By S. H. Smith.

(*Continued from page* 200.)

This little enclosure is not neat and tidy like your flower garden, "D. B.," but it has its points. The flowers are only the wild flora of the district, and all the care they receive is an occasional hoeing to keep down the more rampant growers. But all the dear, familiar English flower faces peep out of the grass in their season and give a loving greeting. Spring is late this year, but in the sunshine are primroses, cowslips, bluebells, wallflowers, anemones, white and blue violets; and in the shade are many other less conspicuous but dainty blossoms.

Under that big sycamore is a comfortable bench and a rustic table large enough to spread our lunch on. This newspaper will do for a tablecloth.

You have been only a few hours in the apiary "D. B.," but during that time I have sized you up, and you will do. A psychological test, you know, the kind the U.S.A. authorities apply, by which to choose the officers for their army and navy. These tests are also in use in several of their universities, and have been employed for years by the business and professional classes over there when selecting employees. You have all the necessary qualifications, a quick receptivity, initiative, and an instructive power of amassing and assimilating data—all that and more.

Now here's the programme. I will select two of those six single brood-chamber stocks, pack them for moving, and send them up to your house this evening. They will be set up, just as they are in my old hives, on the ash-strewn site we prepared last week, and the bees allowed to fly as soon as they have calmed down. As your place is at least three miles away there is no danger of any bees being lost to you by their returning here.

Yes—bees removed to places under two miles will return to their old stand and fly about the spot until they sink exhausted to the ground. They are the field bees which bring in the stores. But not many would be lost if there were still stocks in the apiary as most of the bees will find their way into the other hives sooner or later.

Early to-morrow morning you will be able to see the bees bringing in loads of pollen and nectar. By that time they will be comfortably settled down to housekeeping at their new location. Yours is a better district than mine as you have miles of water meadows by the river and your stocks will go full steam ahead.

It will pay you to take a look at the bees every morning before you go to the office also every evening you may spend a profitable half hour given over to this outside diagnosis. You will observe many details of bee behaviour, and if you do not find the explanations in your guide book I will try and interpret them to you when I come up next Saturday.

What is it all going to cost? Here are price lists and catalogues. Let us figure it out.

Two good Italian bee stocks will cost cash £3 15s. each. Two good W.B.C. hives, fitted each with one brood-chamber and two section racks, complete with frames wired and waxed, and section foundation, cost £2 10s. each. We shall need four extra brood-chambers with wired and waxed frames at 15s. each. A good smoker will cost 8s. 6d., and a nickel-plated hive tool 3s. We must order and pay for two good Italian queen bees at 12s. each. Extra quilts and such like you must bag out of the house. There will be two excluders, on frames, at 3s. each. Then good, white enamel paint and some linseed oil—say 10s. more. And that's about all. Let us total the amounts and see what they come to.

	£	s.	d.
Two Italian bee stocks at £3 15s.	7	10	0
Two W.B.C. hives, fitted, at £2 10s.	5	0	0
Two excluders, on frames, at 3s.	0	6	0
Four extra brood-chambers, fitted, at 15s.	3	0	0
Smoker 8s. 6d., hive tool 3s.	0	11	6
Two Italian queen bees at 12s.	1	4	0
Paint and linseed oil	0	10	0
Total	18	1	6

Call it £20, "D. B.," as there will be petty cash needed for incidentals. Here's my half share, £10. You can send me a cheque for the bees after we put them into the newly-painted hives. You had better talk over the deal with your wife at tea-time. Don't explain too much—and be sure to show her my money—the £10 in cash—you know. If everything is O.K. meet me at the Peas Hill hive shop at 5 p.m. We will look over the hives there, buy what we need and have everything sent up to-night.

Yes, we could send away and get the same outfit at the same price, but there would be carriage to pay and a delay of some days at least. Better buy from and help to support your home dealer. I am glad you are with me in keeping to purchases from the local trade. The same principle applies, of course, to the bees; buy them locally if bees and the prices are right.

And, by the way, "D. B.," we Cambs. bee-keepers may hold up our heads a bit. We did not have to go in for any restocking schemes, nor did we ask for Government or county cash or help in any way to keep our bee stocks going. And there will be doings this year in the old town in connection with the Royal Show, and hundreds of beekeepers will be here.

And that reminds me—have you a half-crown loose in your pocket? Thanks, I am going to send it and your name to the Hon. Secretary of the Cambs. B.K.A. and propose you for membership. You must meet Mr. E. C. R. Holloway, if I have to take you out to Burwell to introduce you to the very best secretary any bee association has ever been blessed with.

Now let us fix up those two stocks so that they will travel safely to your house.

(*To be continued.*)

Notes from Gretna Green.

The month of April was very unfavourable, and stocks are in rather backward condition, none of mine having more than four combs of brood.

And our burly friend, the drone, has not yet made his appearance, although in normal seasons I have seen them hatched out in mid-April. Meantime, the best policy is contraction to conserve warmth, and expansion will follow as the colonies gradually gather strength. Provided its queen is good, a small lot with two or three combs of brood now can easily be built up strong enough to store a three-figure surplus in July. My strongest colonies are those headed by Strgar queens, and I have just made up an early nucleus from each with young fertiles received from Carniola last week.

Although Acarine disease still lingers in the district I have had no loss, my only casualties being two colonies found worthless through loss of queens

On the whole, prospects are favourable for a good season in 1922, if only we get ample sunshine when the days come for honey gathering.—J. M. Ellis, May 1.

Hints for Beginners.

By H. K. Springett.

During May and June there will be many swarms bought by those about to enter the circle of bee-keepers; accordingly, these few notes may be helpful and of some interest to the novice.

There are two features upon which, in my mind, is based the whole foundation of successful bee-keeping.

One is to study minutely the life and natural history of the bee, and the other is the display throughout of ordinary common sense.

Before you purchase a swarm, get a good guide-book. A hive of bees, when you know what a bee is, should become a honey factory, but if you are groping in the dark it is more than likely to become a source of considerable worry and expense, and to eventually be thrown up in disgust.

Another very important point is the choice of hive. I started with two old-fashioned, home-made monstrosities, no part of the one fitting the other, and each a terrible business to handle, the result being I always dreaded the time when compelled to carry out any necessary manipulation.

The hives, and you will want two, should be interchangeable in all their parts, and large enough to take two or three section-racks or shallow racks.

You may decide first of all to work for section honey, and perhaps later may like to try shallow racks for extracted honey. If you have the right sort of hive, this is a simple matter to exchange one method for the other. If, however, the hives will only take sections, you will have to get another and larger one for the shallows, and then you will have two hives, but neither interchangeable.

It is easier to work with shallows; the results are usually greater, and the bees prefer them. Sections are apt to crowd the bees too much, making them more inclined to swarm.

It requires some experience, too, to get a nice full rack of sealed sections, though extracted honey can never, I think, equal in flavour, aroma and appearance a nice new completed section. Then, again, you must be master of your bees, and to attain this you must carry out all your jobs quietly and with full confidence. Follow the guide-book in all you do, and when you start a manipulation have your plan of action at your finger-tips and all your appliances ready to hand.

Don't leave off half way to run up the garden for some forgotten and important accessory, and, above all, make it a golden rule to first see that your smoker is well alight and burning properly, and that you have a spare piece of fuel in your pocket and a box of matches. Nothing is more annoying when at a crucial moment the smoker goes out.

If the bees suddenly become fierce and unmanageable, shut up the hive and complete the work another time, or else you will make a mess of the bees and the bees of you.

Don't be over anxious to manipulate or interfere with your bees. They know their job, but can't get on with it if you won't let them. They are easily disheartened, and sometimes an inopportune examination will put them off for a considerable time.

Try and obtain a knowledge of the interior *from the outside*. You will find the history of the colony is written on the alighting board of the hive. If you live near an experienced bee-keeper he will tell you what I mean, but if you haven't this opportunity go and look for yourself, with your guide-book in your hand for reference. You will find it very fascinating and most instructive.

You must not be disheartened if you don't get any honey the first season. You may, with luck, but you very probably won't. But if you have mastered your bees and are not afraid of them, and have studied all the time, your efforts will not be wasted in the future. The first year I prepared bottles for 50 lb., and actually took 4 lb., to say nothing of stings and other things.

Swarming is the greatest source of worry and anxiety to the beginner, especially if you are out for honey and not increase of stocks, and it is some time before you can cope with this trouble with any success.

The most expert bee-keeper cannot altogether prevent this, though it can be very considerably checked if dealt with at the right moment at various seasons of the honey flow. If a stock does swarm, however, I have always found when working solely for honey that it is an excellent plan to remove two or three combs from the parent stock, leaving a queen cell on one of the combs, making a nucleus of these, and filling up the gaps in the stock with foundation or

worked-out combs, then cutting out all the remaining queen cells, and in the evening returning the swarm to the hive from which they issued.

The guide-book will tell you how it is done.

Beverley and District Bee-Keepers' Association.

The fourth annual meeting of this Association was held in Beverley on April 25, when there was a very good attendance of the 66 members. Mr. W. J. Algar, who presided, was again re-elected. Mr. T. T. Taylor was also re-elected as secretary and treasurer, and Mr. T. W. Turnill was added to the list of the committee as a representative for the Cottingham district.

Acarine disease is still as bad as it ever was in this part of East Yorkshire, considering the comparatively few stocks left for it to prey upon. The Secretary, in introducing a discussion on this question, said he would prefer to keep only British bees if it were possible, but it was impossible to keep them or their present hybridised representatives. He, therefore, suggested that the Association should adopt a policy of keeping one of the pure foreign races and its first crosses, and the exclusion of all beyond first crosses. On his proposal, seconded by Mr. H. Chapman, it was decided that the committee should consider and report upon this question with a view to overcoming the disease by some uniform and practical method which can be recommended to all members.—(*Communicated.*)

Harrow Bee-Keepers' Association.

The Committee of above Association met at "Blenheim," Marlboro' Hill, under the chairmanship of Mr. Worsfall, on April 22, Messrs. Barber, Barratt, Rogers, Stansfield, Wootoon, Wilkinson, and Young being present.

It was resolved to divide the ground covered by the Association into four sections, and that a responsible bee-keeper be appointed in each section, to whom members might apply for advice and practical help in any difficulty. Members will be notified of appointments shortly.

A lecture will be given at "Sunnyside," Cecil Park, Pinner (by courtesy of Mr. Barratt), on May 20, at 3 p.m., by Mr. Herrod-Hempsall.

J. L. Rogers,
K. Young,
Hon. Secs.

Doncaster and District Bee-Keepers' Association.

The first summer meeting was held on Tuesday, April 25, at the apiary of Mr. T. S. Gill, of The Grove, Barnby Dun. The weather was not all that one could wish when contemplating opening a hive, as there was a nasty cold wind, but this was partly remedied by the erection of a wind screen behind the hives to be used for the demonstration. At these summer meetings practical demonstrations are being given to show simply and plainly what every bee-keeper must do in his own apiary, and the proper way of doing it. On this occasion the lecturer, Rev. G. H. Hewison, F.R.M.S., showed us how to examine our stocks in the spring, and what to do when we see their condition. He removed, for example, all the frames from a dirty old hive into a brand new clean one built on the W.B.C. principle. This required great care and caution, owing to the coldness of the afternoon, but all was done very carefully, and the frames removed in threes.

After the lecture, a most sumptuous tea was provided by the host in his billiard room, and everyone thoroughly enjoyed this, the first of our summer gatherings.

M. Yate Allen, Hon. Sec.

Novelties for 1922.

Dadants Non-Sag Foundation.

The agents for this foundation, Messrs. Steele & Brodie, have kindly sent us a sample. The wires are much stronger than that generally used, and instead of being straight are crimped. They are electrically embedded, are vertical and placed at intervals of 2½ inches. It is practically impossible for the foundation to sag. No other wiring is needed, but it requires a different bottom bar to take full advantage of this method.

Keeping Caged Queen Alive.

[9937] I have a stock of bees with an old queen which I wish to requeen in May

As I do not know what day in May I shall receive by post the fresh queen should I let the old queen remain until I have received her; if so, how can I keep the fresh queen alive until the change can take place (say six days)?

(2) Is there any possible way to tell the difference between a 1922 queen and one hatched out in any previous year?—A. G.

Reply.—(1) Better not remove the old queen until you have the new one. The latter can be kept alive in the cage several days in a warm place, with plenty of candy in the feed hole and eight or nine workers. There is no necessity to keep her six days. The new queen in the cage may be placed over the frames as soon as the bees realise they are queenless, which will be in a few hours. We have removed the old queen and put the cage with new one in position at one operation, and introduction has been successful.

(2) Only by her appearance, but there will be practically no difference between a 1922 queen and a late-hatched 1921 queen. Aged queens have the wings more or less frayed and lose their hairiness, especially on the abdomen.

Prices.

[10651] As an amateur bee-keeper of some 14 years' standing, I feel that some one of us should start the ball rolling for the reduction in prices of bee appliances. It is the amateur bee-keeper who is the principal "consumer" of bee appliances and the main support of the bee appliance manufacturer. I have tabulated below the 1911 and 1922 prices, respectively, of a few "bee goods" taken at random. Against them I have shown the percentage of increase in price. My personal view of this increase in prices may be a lenient one. It is that manufacturers are entitled to charge 100 per cent. increase on pre war prices. In other words, I am of the opinion that an article costing us 6d before the war may be expected to cost 1s. now. Every decimal of 1d. charged in excess of that 100 per cent. I consider a flagrant robbery, or perhaps it might be more kindly described as "wholesale profiteering."

An explanation of these extraordinary increases in prices by the manufacturer is surely desirable.

1911.	1922.	Actual increase over pre-war cost.
Sections 24/- per 1,000...	99/- per 1,000	312 %
Metal Ends 1/9 per gross	3/3 per gross	86 %
Standard Frames 7/9 per 100	23/- per 100	196 %
Porter Bee Escape 6d. ea.	1/2 each	133 %
Brass Cones 2d. per pair	6d. per pair	200 %
Straw Skeps 1/9 each ...	3/6 each	100 %

Another disparity in present prices may be cited in the case of sections which can be obtained by any amateur bee-keeper direct from America, where they are manufactured for £2 15s. per 1,000 post free, whereas we are asked to pay £4 19s. from our own manufacturers. This enormous disparity in the price of sections is particularly noticeable, as they are unavoidably purchased by our manufacturers from America. This suggests bad buying by our manufacturers, and while one may be inclined to a little leniency where rates of exchange are involved, it is quite time that our manufacturers learnt that we are not going to be penalised by their bad business transactions, or quite probably by their speculation in sections.

May I appeal to brother bee-keepers by using the popular slogan, "Compare prices," and let us see what we can do to get the prices down?—R. H. Dutchman (Capt.).

An Unusual Occurrence.

[10652] I would like to call your readers' attention to the unusual fate of a stock of bees owned by a gentleman in this district.

It so happened the above-mentioned gentleman was desirous of burning some paper, and without thinking further, set it alight in the centre of his garden in the vicinity of his hives, the wind unfortunately drove the smoke directly into one of the hives (his best stock).

This, of course, caused the bees to consume stores which they would not otherwise have done. As very bad weather prevailed at the time this set up dysentry, resulting in the bees dying inside the hive, blocking the entrance, and suffocating the whole colony.

This little advice is intended for the benefit of your readers.

No doubt there are hundreds of bee-keepers who have lost their stocks in a similar manner, and have not been able to find out the cause.

Have any other of your readers had a like result?—E. W. Jones, Dorridge Apiary.

Depth of Hive Sides.

[10653] As a bee-keeper and amateur carpenter who always builds my own hives and appliances, I was interested in the remarks on hive-making some time ago in the B.B.J. Following the observations in jottings, February 16, by Mr. Hamshar, I expected the matter to be again referred to and some of the objections countered. With Mr. Hamshar I am in full agreement as to the difficulty of handling supers in a 12-inch-bodied hive, and agree there is no hive so easy to work, either by professional or beginner, as the 9-inch. Mr. Hamshar advises 9 in. by $\frac{3}{4}$ in., which can be had ready dressed. I take it this correspondent is a practical worker, and to him a 9 in. dressed board is 9 in., but to the amateur it is only $8\frac{3}{4}$ in. This is the point I wished to refer to as the amateur, when building, will be surprised to find the level of his bars above the sides; thus, depth of brood box $8\frac{1}{2}$ in., plus bar thickness $\frac{3}{8}$ in.—an eighth of an inch over the sides. Not a great deal, but just sufficient to cause the amateur builder to wonder what has gone wrong with his measurements. I may here observe some timber dealers do not stock dressed $\frac{3}{4}$-in. stuff; it is so in this district, the nearest being $\frac{7}{8}$ in.

I make this observation, as this latter size may be delivered, and again the builder be out in the measurements. The point made in favour of the 12 in. size—that it makes an all snug in winter pattern—is not without its merits, but in my opinion does not balance the disadvantages of easy manipulation of supers. I may suggest a simple remedy. Make a frame about 3 inches deep the exact size of inside of outer case, so when roof is on it will fit down without trouble. Cover one side of frame loosely with sacking or similar material of a soft nature: it must not be hard. Inside this tray-like arrangement can be packed any covering material, placed over, or removed from, the top of bars easily. There are other points of objection raised by Mr. Hamshar, which might be referred to, but perhaps above is trespass enough at the moment. This much might be added. The bee-keeper who has a little carpentering skill should not be deterred from building his hives. He will find the winter spare time spent preparing his hives, supers, etc. for spring and summer very interesting and adding greatly to the enjoyment of the pleasures of bee-keeping, apart from the saving in expenses. George S. Anderson.

Notices to Correspondents

Correspondents desiring an answer in the next issue should send questions to reach this office NOT LATER than the FIRST POST on MONDAY MORNING. Only SPECIALLY URGENT questions will be replied to by post if a STAMPED addressed envelope is enclosed. All questions must be accompanied by the sender's name and address, not necessarily for publication, but as a guarantee of good faith. There is no fee for answering questions.

A. F. W. N. (Bristol).—*Cause of mildew.*—It is quite possible for the dampness from unsealed and fermenting stores to cause mildew on combs. As there was a sour smell, this was probably the cause in your case. Did you give ample ventilation at the entrance?

"INTERESTED" (Cheshire).—*The Demaree plan.*—Briefly this is given in "The A B C and X Y Z of Bee-keeping" as follows:—"A week before the actual honey flow the sealed and hatching brood should be put in the upper storey and the queen and unsealed brood in the lower storey, with a queen excluder between. As the brood hatches out in the upper storey it will leave room for the storage of the first new honey."

J. M. M. (Mon.).—*Uncapped granulated honey.*—The supers containing this may be put on the hives now. If put on *before* the honey flow the bees will probably clear it out, but may not do so when honey is being stored.

A. L. (Cheshire).—*Using combs after Acarine disease.*—As the combs have been thoroughly exposed to the fumes of formalin or sulphur they will probably be quite safe to use again. As an extra precaution you may spray with a solution of disinfectant and water. Keep the other hives supplied with disinfectant, and see that the colonies have young, vigorous and prolific queens.

J. P. (Ireby).—*Combs united.*—Take away the two combs that are built together when they contain no brood. They may be put at one side of the brood box, and separated from the others by a piece of queen excluder until the brood is all out. If the bees swarm put the united combs on the outside of the others, and later you may be able to find them clear of brood. Undesirable combs should be removed when packing down for winter, or placed at the outside of the others in the brood box, so that they may be removed early in the spring before they contain brood.

D. H. B. (Southampton).—*Feeding bees after journey by rail.*—It is not necessary to do this prior to transferring them from the travelling box—unless they are short of stores. Place them on the stand the hive is to occupy, and allow them to fly for an hour or two before transferring them.

F. S. (Bedford).—We have no extractors for sale. Watch our small advt. columns.

F. G. (Worcester).—Yes.

Bee Shows to Come.

May 24-27 at Guildford.—Surrey B.K.A. Show. Two Challenge Trophies, Apis Club Silver Medal, B.B.K.A. Silver and Bronze Medals and Certificate, Surrey B.K.A. Silver and Bronze Medals, Open Classes Honey, Wax, Appliances, etc., Demonstrations, Lectures, etc.—Hon. Secretary, W. E. Hamlin, 43, Norbury Court Road, Norbury, S.W.16.

June 7 and 8, at Chelmsford.—Essex B.K.A., in conjunction with the Essex Agricultural Society's Diamond Jubilee Show. Apis Club's Silver Medal, Essex Agricultural Society's Silver and Bronze Medals, and also the B.B.K.A. Medals and Certificate, besides many prizes. All Classes Open. Lectures and Demonstrations on both days in the Bee Tent by the County Bee Instructor.—Schedules and Entry Forms from Secretary, Essex Bee-keepers' Association, Rawreth, Wickford, Essex. (Stamped, addressed envelope, please.)

Royal Show, Cambridge, July 4 to 8.—Over £40 in prizes. All classes open.—Schedules and all information from Mr. E. C. R. Holloway, Burwell, near Cambridge. **Entries close May 20.**

July 26-27, at Cardiff, Sophia Gardens.—Glamorgan Bee-keepers' Association, in connection with Cardiff and County Horticultural Society's Show. Open Classes. Special prizes: Taylor's W.B.C. Hive and Apis Club Bronze Medal.—Schedules from Secretary, Chas. F. Davies, 5, Borstal Avenue, Cardiff.

September 16 to 22.—British Bee-keepers' Association Annual Show at Grocers' Exhibition, Royal Agricultural Hall, Islington, London.—Schedules from Hon. Secretary, B.B.K.A., 23, Bedford Street, Strand, London, W.C.2. **Entries close certain September 4.**

HIGHLAND SHOW

DUMFRIES SHOW, JULY 18-21.

EXHIBITION OF BEE APPLIANCES & HONEY.

£54 in Prizes. Entries close 1st June. Entry Forms from John Stirton, Secretary, 3, George IV. Bridge, Edinburgh.

Special Prepaid Advertisements.

One Penny per Word.

Trade *advertisements of Bees, Honey, Queens, and Bee goods are not permissible at above rate, but will be inserted at* **1½d.** *per word as* **"Business"** *Announcements, immediately under the Private Advertisements. Advertisements of Hive-manufacturers can only be inserted at a minimum charge of 6s. per ¼in., or 12s. per inch.*

PRIVATE ADVERTISEMENTS are only intended for readers having **Surplus Stock** *to dispose of.* **Driven Bees, Nuclei,** *and* **Queens** *that are reared or imported for sale, are Trade Advertisements, and can only be accepted under trade terms. A charge of 6d. extra per insertion will be made if a box number is used.*

Orders for three or more consecutive insertions in "The Bee Journal" entitle advertisers to one insertion in "The Bee-Keepers' Record" free of charge.

Advertisements must reach us NOT LATER than FIRST POST on MONDAY MORNING for insertion in the "Journal" the same week.

PRIVATE ADVERTISEMENTS.

FOR SALE, few splendid Stocks Italian Bees, £3 each; 10s. extra for travelling box, returnable.—ROSE, Hilgay, Norfolk. e.1

WANTED, good, clean Shallow Drawn Combs.—GORDON, Foredale, Isle of Man. e.45

ITALIAN HYBRIDS, Simmins' strain, 6-frame Stock, 60s.; box returnable.—HUGHES, Capel-Hendre, Pantyffynnon. e.3

NATURAL strong, healthy Italian Swarms, 20s. to 25s.; package returnable. CADMAN, Codsall Wood. r.e.4

WANTED, Stock pure Carniolans (1921 vigorous Queen), with W.B.C. Hive. Exchange Iron Age combined garden hand drill, hoe, etc. (cost £9).—BIRKETT, Beddlestone Farm, Brook, Ashford, Kent. e.5

OBSERVATORY HIVE, 3 frame, whitewood, stained walnut polished, turntable, double glass, dead air space between enclosed two panelled doors each side, takes three sections above; used twice; guaranteed healthy; perfect condition; 6 guineas, or near offer.—FREEMAN, "Avondale," Teignmouth.

SWARMS from healthy Stocks, May and June, 25s., carriage paid. Cash with order.—ELDRIDGE, Nortons, Battle, Sussex. e.8

SHALLOW BARS, drawn out, wanted. Quote lowest price, carriage paid.—HIRD, Church Terrace, Inverurie. e.9

SWARMS, May delivery, 7s. 6d. per lb.; established on 5 frames, 45s.—BARRETT, Sunnyside, Cecil Park, Pinner. r.e.6

STRONG, healthy Stock, on 10 frames, 1921 Queens, in Taylor's complete standard W.B.C. Hive; further particulars on request; price £4 10s., carriage paid.—WILLIAMS, "Garfield," Llanfairfechan. e.12

EXTRACTED ENGLISH HONEY, £6 per cwt.; sample 3d.—DUTTON, Terling, Witham, Essex. e.13

BIRMINGHAM. — For Sale, good Geared Extractor, six Hives, 100 Frames with Foundation, Queen Excluders, Section Racks, Rapid Tin Feeders; no disease; 100 chicken size good metal Brooder, complete. What offers? Cheap.—174, Jockey Road, Sutton Coldfield. e.14

ITALIAN BEES.—Three strong and healthy Stocks in Hives, with queen excluders, four section racks, smoker, etc. (hives in good condition, but need painting); price £15; purchaser to undertake removal.—McKERROW, Enderley, Little Kingshill, Great Missenden, Bucks. e.16

STRONG STOCKS HYBRIDS, 75s.; Hive, 20s.; box 10s., returnable.—REV. COOPER, 62, Park Hill, Carshalton. r.e.15

FOR SALE, strong Stock Bees, complete with Hive, also spare hive and equipment; the lot or separate.—Write particulars, 96, Court Lane, Erdington, Birmingham.

£15 OR NEAREST OFFER for complete Outfit, comprising one Hive and very strong Stock of bees covering at least 15 standard frames, easily make two good stocks, two empty W.B.C. and one Nucleus Hive and all fittings, extra drawn-out and made-up standard and Shallow Frames, Wired Foundation, Lifts, Geared Extractor, Ripener, and all Appliances; in first-class condition; never had disease any description; bargain; cost over £30.—DETTMER, Cedar Villa, Lancaster Road, New Barnet. e.25

STRONG HEALTHY SWARMS for Sale from mid-May, 37s., carriage paid. Cash with order. Boxes and frames returnable.—PULLEN, Ramsbury, Hungerford. r.e.37

10-FRAME STOCKS, Italian Hybrids, in nearly new Hives, Lee's Improved, complete with crates, sections, or drawn-out shallows and excluder, £5 2s. 6d., carriage paid; guaranteed healthy.—TUNMER, Chalfonts, Leiston. r.39

BEGINNER requires Catalogues, information.—MERRETT, "Sabrina," Stroud. e.36

WANTED, Extractor, free from rust, and price to C. LOWE, 42, Park Terrace, Tondu Glam.

55 TWO healthy Stocks, doing well, 7 frames; overstocked. BARBER, Windermere Road, Coulsdon. e.40

SWARMS, May 10s. lb., June 8s. lb., Dutch, guaranteed healthy (always buy by weight). Orders in rotation. Note extract from letter received: "Up to the time of the introduction of these Dutch bees our average yield per hive was not more than half of the record yield given by these Dutch bees."—WOOD, Colewood Apiary, New Road, Mitcham, Surrey. r.e.41

HYBRID ITALIANS. A few surplus Stocks, very prolific, good workers, gentle; 10 frames, £4; box to be returned. Box 62, B.B.J. Office, 23, Bedford Street, Strand, W.C.2. r.d.59

SIX HIVES OF BEES, all strong, healthy, Hybrid Italian, 9-frame Stocks in good hives, carriage paid, £4 each; leaving the country.—BONNER, Freshford, Bath. d.61

BEES.—Italian Swarms from immune strain; free from disease; guaranteed healthy; May-June, 25s.—W. YOXALL, Oaken, Wolverhampton. d.67

SALE, healthy Italian Hybrid Bees, Hives, Appliances. Particulars, stamp.—May be seen STUBBS, 117, Brunswick Park Road, Wednesbury. d.76

SURPLUS STOCKS for Sale, 8-10 frames, Italian Hybrids, 1921 Queens, from 70s.; also few spare 1921 Queens now available, 12s. 6d. each.—HOSEGOOD, "Beecot," Cliff End, Purley, Surrey. d.77

2½ CWTS. of pure Essex Honey in tins, 28 lbs. 4 £2, 1 cwt. £7 15s., the lot £17. Also strong, healthy Stocks in good Hives, £5 5s. each, or near offers; carriage paid for cash with order.—TUNMER, The Apiary, Maldon. r.d.94

FOUR 28-lb. tins Honey. Offers wanted.—J. H. RUMBALL, 35, Benslow Lane, Hitchin, Herts. d.78

IN CONSEQUENCE of the Herefordshire County Council giving up their Restocking Scheme, the Apiary is for disposal. Italian Hybrids, all good, healthy 10-frame Stocks, all 1921 Queens, either with or without hives, without hives sent in special travelling box carriage paid to nearest station, 70s.; box charged 10s. extra, which will be returnable and cash allowed when received. Also 200 drawn-out Shallow Combs, 1¼ top bars, perfectly healthy, 18s. 6d. per dozen, carriage paid. Orders booked in rotation. Cash with order.—J. ARNFIELD, Arncroft, Breinton, Hereford. r.d.17

SELL.—Rotax all-brass Motor Car Head Lamps, self-contained acetylene, very powerful, 30s. the pair; two small powerful Acetylene Brass Head Lamps, with separate generator, suitable light car or cycle car, £3 the set; Austin Rear Wind Screen, mahogany framework, £7; Mills' Automatic Acetylene Generating Plant, suitable for 10-roomed house, £6; quantity of Acetylene Gas Brackets and Chandeliers, prices with particulars; small folding Magic Lantern, 30s.; single barrel .410 Gun, 30s.; motor cycle all-rubber Ponco, reaches to ankles, wind- and weather-proof neck and sleeves, 50s.; all carriage forward.—HERROD-HEMPSALL, Old Bedford Road, Luton, Beds. c.77

SWARMS.—Book now! Hybrid Italians, 30s. Original stock from Lincs. Association Restocking Scheme. Inspection of stocks invited, Sunday excepted. Box 5s. extra, returnable.—R. C. SILVERWOOD, Bottesford, Notts. r.d.46

SELL a Lee's 12-frame W.B.C., second-hand, one lift and one shallow frame, supers, 30s.; disease free; carriage forward.—Box 65, B.B.J. Office, 23, Bedford Street, Strand, W.C.2. d.97

SELL Bee-keeper's Outfit complete or separately, two W.B.C. Hives, quantity Racks, etc., Extractor, Ripener, all Accessories.—FARRELL, 8, St. Mary's Grove, Barnes. r.d.41

BUSINESS ADVERTISEMENTS.
1½d. per word.

THE WISE BEE-KEEPER looks for quality. The South Hampshire Apiaries breed only from the very best strains. Result: Quality and satisfaction. Beginners' Outfits from £5.—All communications, H. E. NEWTON, New Milton, Hants.

"IT MUST BE COTSWOLD."—Famous Queens of reputation, raised by an expert breeder under ideal conditions; just try one; 11s. 6d., or three 31s. 6d.—BOWEN. c.30

DON'T BEES STING!—Wear a "Bowen" Veil, beautifully cool, 2s. 2d. e.21

PACKAGE BEES, COLONIES, NUCLEI, carefully selected, skilfully packed.—BOWEN, Cotswold Bee Specialist, Cheltenham. e.22

A FEW 8-frame Italian Stocks, immediate delivery, almost ready to swarm, 60s.; guaranteed healthy; travelling boxes 10s. extra, returnable. Twice as cheap as nuclei.—J. YOUNGER, 16, Maid's Causeway, Cambridge. r.e.26

NUCLEI, Hybrid, 3-frame, £2; no disease eight years; excellent workers; box 10s. extra, returnable.—COX, Apiarist, Chipping Sodbury, Glos. e.27

MAY SWARMS, 25s.; Queens, 7s. 6d.; Nuclei, 30s.—WOODSFORD, Expert, Chilworthy Apiary, Chard. r.e.28

SWARMS (Holmewood strain), 7s. 9d. lb.; other strains, 7s. lb.; boxes 10s., returnable; carriage extra.—ANDREWS CO., 78a, Westgate, Peterboro'. e.29

TO BEGINNERS and others wishing to increase their stock.—Italian Hybrids, 3-frame Nuclei, delivery about June 10 next, 1922 Queens, price 35s. each.—HOSEGOOD, Beecot, Cliff End, Purley, Surrey. r.e.11

GRAFTON BEES AND QUEENS are good as money can buy. Early Nuclei, guaranteed the very highest grade, 3-frame, £2; 4-frame, £2 10s.; carriage paid.—Further particulars, MASOM & HEDLEY, Grafton Regis, Stony Stratford. e.19

STRONG, healthy 8-frame Stocks, Italian and Hybrids, immediate delivery, £3 each; first natural Swarms, Hybrids, June delivery, 35s.; all carriage paid; boxes free; approval; deposit.—JOSEPH DRAPER, Saw Mills, Aughton, Ormskirk. e.17

MAY SWARMS in new cane bound skeps, 37s. 6d., carriage paid, with super. All kinds of Skeps for Sale.—H. SEAMARK, Skep Works, Willingham, Cambs. e.30

IMPORTED ITALIAN QUEENS, Penna or Tortoras, 9s. 6d., from May 14; Nuclei, 3-frame, 35s., headed imported Queens, May delivery.—HENSLEY, Luton Apiary, Chatham. e.42

SWARMS AND NUCLEI for Sale, Italian, Dutch and Hybrid; very best strains; lowest prices.—WILKES, Pelsall, Walsall. r.e.10

FREE.—1 lb. "Airco" Foundation with every Dutch Skep of Bees (soon swarm), £3, carriage paid.—LONGLEY, 35, Tharp Road, Wellington, Surrey. e.2

HIGHLAND & AGRICULTURAL SOCIETY. DUMFRIES SHOW, 18th-21st JULY.
Entries for IMPLEMENTS, etc., close on May 15. STOCK Entries on June 1.
Premium List and Entry Forms from JOHN STIRTON, 3, George IV. Bridge, Edinburgh.

HIGHLAND AND AGRICULTURAL SOCIETY.
DUMFRIES SHOW, 18th-21st JULY.
Entries close for CATTLE, HORSES, SHEEP, GOATS, PIGS, POULTRY, DAIRY PRODUCE, BEE APPLIANCES & HONEY, WOOL, RURAL INDUSTRIES and HORSE-SHOEING on June 1.
Premium List and Entry Forms from JOHN STIRTON, 3, George IV. Bridge, Edinburgh.

BARGAINS.—W.B.C. Hives, as new, 24s. complete.

AMBROSIAN 6-COMB STOCKS, packed brood and bees, with superb young Queen, 60s. Sound investments.

AMBROSIA APIARIES, S. Farnboro', Hants. e.31

ITALIAN FERTILES, May, 10s. 6d.; 4, 38s.; 6, 56s.; 12, 96s. Special quotations 25 to 100.—ATKINSON, Fakenham. r.e.35

BENHALL BEES.
Italians—Nuclei, 3-frame, 1922 imported Queens, May, 40s.; June, 30s.; carriage paid. Returnable boxes, 10s.
RIVIS & GRAY,
BENHALL, SAXMUNDHAM.

ITALIANS.—Nuclei, 1922 Queens, 3 frames, May 40s., June 32s.; Colonies, 6, 8, 10 frames, 50s., 62s., 73s.; returnable crates.—ATKINSON, Fakenham. r.e.32

CHOICEST BRITISH GOLDEN 10-frame Colonies, 80s.; 6-frame, 58s.; returnable crates.—ATKINSON, Fakenham. r.e.33

I DESPATCH pure Italian fertiles by return post.—ATKINSON, Fakenham. r.e.34

FINEST ITALIAN NUCLEI, with Cannell's imported 1922 American Beauty Queens; satisfaction absolutely guaranteed; May, 3-frame 45s., 4-frame 55s.; June, 40s. and 47s. 6d.; carriage paid; travelling boxes returnable.—HOGAN, Boxford, Suffolk. d.71

THE 1922 15-frame "Thames" Hive for 28s. r.d.72

FINE, healthy, vigorous, natural-reared "Cleopatra" Stocks from THE THAMES VALLEY BEES (Regd.), Teddington. r.d.73

STOCKS genuine Swiss Bees for Sale. Write for Descriptive Circular. — DAVIDSON, Forest Road, Burton-on-Trent. c.195

SWARMS BOOKED, May delivery, Italian, Carniolan, Dutch; low prices.—DAVIDSON, Forest Road, Burton-on-Trent. c.198

STRONG STOCKS healthy Dutch Bees in Skeps; reduced prices; immediate delivery. Write actual importer. — DAVIDSON, Forest Road, Burton-on-Trent. c.196

COLONIAL HONEY.—Australian white, 60-lb. tin, 38s., two 60-lb. tins, 75s.; finest West Indian, 56-lb. tin, 40s., two 56-lb. tins, 71s.; carriage paid.—LONDON TRADING AGENCY, 32, St. Mary Axe, E.C.3. e.44

ITALIAN, Carniolan and Hybrid Stocks and Nuclei for Sale, strong and healthy, delivery May, low prices.—DAVIDSON, Forest Road, Burton-on-Trent. c.197

NUCLEI.—A limited number of 3- and 4-frame Nuclei for disposal, Hybrid Italians, healthy; 3-frame, £2; 4-frame, £2 10s.; June delivery; travelling box 10s. 6d., returnable.—Box 63, B.B.J. Office, 23, Bedford Street, Strand, W.C.2. d.65

SIX, eight, and 10-frame Stocks, packed with brood, bees, and young fertile Queen.—HARVEY, Apiarist, Andover.

SWARMS.—Any weight supplied at lowest rates with young fertile Queen.—HARVEY, Apiarist, Andover. r.d.90

ITALIAN QUEENS, "Mellona" strain, home-bred for producing strong, healthy, non-swarming stocks and bountiful honey harvests, 10s.—Obtainable only, MISS PALING, Golden Square, Henfield, Sussex. Vacancy for Pupil. r.d.85

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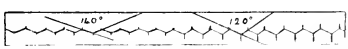
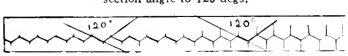


From a plaster cast of an ordinary comb foundation showing the flat angle of 140 degs. At the right the bees have built it out, thinning the base and changing the cross-section angle to 120 degs.



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The Bee-Keepers' Calendar.

MAY, 1922

11 Thursday. "Thee wants ti gan up fierce-like, and sing a bit as thoo gans, an' swear when thoo gets ti top, an' mek bees think thoo's as good as them."

E. C. Booth, "Taking a Swarm."

12 Friday. "A bush of May flowers with the bees about them,
Ah, sure no tasteful nook would be without them."

Keats, "I stood Tip-toe."

13 Saturday. "The young corn is green, brother, where the rabbits run:
It's blue sky and white clouds and warm rain and sun.
It's song to a man's soul, brother, fire to a man's brain,
To hear the wild bees and see the merry spring again."

Masefield, "The West Wind."

14 Sunday. "The bees are types of souls that dwell
With honey in a quiet cell;
The ripe fruit figures goldenly
The soul's perfection in God's eye."

Katharine Tynan Hinkson, "Of an Orchard."

15 Monday. "That when their kings lead forth the early swarms,
First-fruits of spring, and new-born from the comb
Young bees are playing; then a friendly bank
May woo them to take refuge from the heat,
Or tree persuade them to enjoy its shade."

Virgil, Georgics, Book IV.

16 Tuesday. "Now the brown bee, wild and wise,
Hums abroad and roves and roams,
Storing in his wealthy thighs
Treasure for the golden combs:
Dewy buds and blossoms dear
Whisper 'tis the sweet o' the year."

Meredith, "The Sweet o' the Year."

17 Wednesday. "Poor, luckless Bee, this sunny morn:
That in the night a wind and rain
Should strip this apple tree of bloom,
And make it green again."

W. H. Davies, "A Luckless Pair."

Reviews.

On the Mite (Acarapis woodi, *Rennie*), *associated with Isle of Wight Bee Disease*. By Stanley Hirst. (Published in the Annals and Magazine of Natural History, Ser. 9, Vol. vii., p. 509, June, 1921.) In this short paper which is characterised by the excellence of the illustrations, the author gives a description of a new genus of mite and defines in what it differs from *Tarsonemus woodi*, and thinks it is so specialised that it should be entitled to be considered a new genus. In describing genus Acarapis, Hirst, in the Proc. Zool. Soc., 1921, p. 357, the author says:—

"Closely allied to *Tarsonemus*, but differing as follows:—Second and third legs of larval stage very short (almost rudimentary) and without either claws or pulvillus (whereas in larva of *Tarsonemus* these legs are about as long as the first and provided with paired claws and a pulvillus). Female lacking the club-shaped pseudostigmata that are present in *Tarsonemus*, and with the fourth leg shorter and wider and provided with more numerous hairs (in this last respect somewhat resembling the fourth leg of *Scutacarus*)."

A detailed description follows with illustrations of the mite, which give a good idea of its characteristics. The author states that apparently only adult bees are infected by this mite, which lives in the tracheal tubes of the head and thorax. It is not known how infection takes place, but he thinks "possibly by bees visiting the same flower or drinking place. Many species of Tyroglyphidæ have a migratory or travelling stage (hypopus), but this stage is not known to occur in the Tarsonemidæ. The hypopial stage is always a nymph, and there is no free nymph stage either in *Acarapis* or *Tarsonemus*, so that it is probable that the disease spreads through the adult mite." He further says that whilst dissecting some healthy hive-bees from Golder's Green, he found a single specimen of a male *Tarsonemus* (in the strict sense of the term) in one of the thoracic trachæ, so that he thinks more than one species of mite of this family can gain access to the respiratory system of the bee.

Mites Injurious to Domestic Animals, by Stanley Hirst, Assistant Keeper, Department of Zoology (published by the Trustees of the British Museum, price 3s.) Since writing the foregoing review on the Mite *Acarapis woodi*, we have received from the Trustees of the British Museum No. 13 of the Economic Series of their publications, which treats on the Mites or Acari parasitic on domestic animals. These, which belong to the class *Arachnida*, differ from insects in having eight legs instead of six, and the author says: "The chief feature distinguishing mites from other Arachnids is that they have only three pairs of legs when they are hatched from the egg, the fourth pair being added later."

The mites found on domestic animals differ in their habits, some burrowing in the skin, others live in the sebaceous glands while others form scabs on the surface of the skin. Nine of the families of the Order Acari are dealt with in the pamphlet, and these are fully described and are made more intelligible by the excellent illustrations accompanying them, which add greatly to the value of the work.

Of special interest to bee-keepers is the *Appendix on Acarine Disease of Hive Bees*. After describing *Acarapis* as in the preceding review, the author gives a diagnosis of "Isle of Wight" disease, and refers to the work of Dr. Rennie and those associated with him, with their conclusions. (This was fully reviewed in the BRITISH BEE JOURNAL, April 28, 1921, page 185.) The author also reproduces the leaflet issued by the Joint Committee on Research in Animal Nutrition of the University of Aberdeen and North of Scotland College of Agriculture on "Instructions for the Control of Acarine Disease" (see "B.B.J." March 17, 1921, page 115).

The pamphlet consists of 107 pages, and among the illustrations on page 95 there is a reproduction of one by the Rev. G. H. Hewison which appeared on page 212 of "B.B.J." for 1921, showing a tracheal tube of honey bee infested with *Acarapis woodi*. The work concludes with information "On Mounting Mites for Examination under the Microscope," which will be found useful by those bee-keepers possessing such an instrument.

Jottings from Huntingdonshire

I have been entertaining myself looking through the many catalogues which I have received at different times this year from bee appliance makers. What strikes me most is that most of these notables in the apicultural world have a pet bee, a strain which they have built up, they tell us, by careful selection. Some go so far as to give these pet bees distinctive names. I do not wish to quarrel with these gentlemen—I am all for experiments and exercised skill where apis is concerned—but why not call these bees by

their strain, and not give the impression that a distinct bee has been evolved when such is not the case? True, some great men in the world of beedom have evolved a distinctive bee, and fixed its characteristics, and, further, have done it so successfully that the virgin of the species will rarely mate with drones other than of her own race. Which reminds me that only one catalogue lists the Holmwood bee. Again, what is meant by Italian hybrids, Dutch hybrids, Carniolan hybrids, and so forth? It appears to me that in ordering hybrids you may get served with the veriest mongrels. I shall be told that the word hybrid means mongrel, and those people ordering such bees should not expect to find them other than greatly mixed. Is this fair? Italian-hybrid, used as a compound word, implies that the mother bee is a pure Italian which has mated to a drone of some other breed; but, dear me! any old bee which has a semblance of gold behind the thorax is described as an Italian hybrid, although it may have been generations back when the first crossing took place, and, pray, how do these good people distinguish between Italian-Dutch-Dutch-Carniolan from Carniolan-Dutch-Italian-Dutch? It may be that some of the firms alluded to mean by Italian hybrid Italian crossed with some other strain, and Dutch and Carniolan hybrid likewise; but I regret to say that experience has taught me that if you place orders with some people for a stock or swarm of Italian hybrids, it just means that you will get a mixed multitude, with one in every dozen or so showing some golden markings on the segments of the abdomen. For Dutch hybrid you will get any bee so long as it is dark, and Carniolan hybrid means that occasionally one or two pure Carniolan queens are introduced to the apiary, and so its presumed Carniolan blood permeates the whole of the colonies. It is not my wish to be unduly censorious, but I do feel this question of hybrids should be carefully defined. Perhaps some will think it is the duty of the parent Association. There I will leave the matter at present.

With regard to first crosses, may I repeat what I have said before? Take care of your drones, and keep the bees you want to keep pure together. This does not mean that no cross fertilisation will take place, but it does minimise the risk. What is more, a princess born of a first cross will often mate with a pure drone of its grandmother's breed if we see that such are about. This, I think, is as far as cross mating should go.

The past week has been one of tears and smiles where the weather is concerned. The bees have been able to do much during the smiles. An amazing number of dandelions are in bloom, and from this source chiefly comes all that is taken to the hives. Rather pungent honey; I hope none will get to the supers. The apple bloom is not yet in its prime; I hope when it is the sun will shine, for then our supers should get heavier day by day. Those who want swarms will not have long to wait, judging by the drones buzzing about.

E. F. HEMMING.

Steeple Gidding.

Week-End Bee-Keeping.

By S. H. SMITH.

(*Continued from page* 212.)

It won't take us ten minutes to fix up those two bee stocks ready to forward to your house. In case the spirit moves you at any time to come down here and visit the apiary when I am not here, D. B., you will find the key of the honey house under this hollowed brick. Everything has its place, and if, after using them, you will kindly return all tools, etc., to where they belong it will save a lot of hunting about to find them.

See those wire screens with 3-in. sides? They fit snugly over any brood box or super in the apiary. The holes through the sides allow for the insertion of screws. These little angle-irons secure the brood boxes to the floorboards, and these little pierced metal plates fasten together at the joints brood boxes or supers when piled up. Those pieces of wire cloth, cut to fit, are pushed into the entrances and tacked down.

Yes—I have been thinking it over, and you may as well start with a good send off. I'm going to let you have the two stocks we transferred last. The twenty extra combs and the two brood chambers you may return to me at the end of the season, or earlier, if not wanted. Having plenty I shall not miss them. Of course we might buy them, but we do not want to bust the treasury. I figure they are worth 2s. each. Good d.o. combs are some of the best things you can have in an apiary, D. B. And every season all such combs should go through the bee stocks to be freshened, repaired, and strengthened by the bees.

We shall need only a screwdriver and the carbolic cloth. Let us dust and clean the screens, etc., and we shall be ready to tackle the job.

Off goes the roof and the outer cases. If done quietly and without jarring, not a bee will notice anything. But look at them piling into the hive. A change in the weather is coming, they can sense such long before we can. The sky is blue and the sun shining, and it looks all right, but you may trust the little beggars for knowing what's what when it comes to weather changes. It is not as if only the bees in this hive were acting that way—all of them all over the apiary are at it.

One angle iron at each side will be plenty. Notice the ends of the sides of the brood box project, and between them at the bottom is a wooden piece pierced by two holes. In these we insert screws. We now screw on the flat plates at the joints. No need to fasten anything at the front.

We take off the carpet quilts, and draw the carbolic cloth on as we withdraw the calico quilt. We place the latter top side down on the ground in front of the hive. On goes the screen, in go the screws. See the bees come rushing up to discover what is up. We replace the carpet quilts and all will be quiet in a few minutes.

There will always be a few dazed young bees clinging to a calico quilt. By placing

it in front of the hive they soon regain their wits and fly back home. We can shake them off if we need the quilt in a hurry.

It is very easy to super skyscraper stocks, D. B. The young bees do most of the work upstairs. When quilts are taken off as just shown you disturb very few bees, and supers may be given very quickly.

Not until the last field bee is at home may we place the entrance screens. There is nothing more to be done until the cart comes to remove them. There will be no drain on the treasury, D. B., the seller delivers the goods. But while you are at tea I shall be hustling about the village to find someone who will condescend to haul the stocks at his own price. The Saturday afternoon holiday of the agricultural labourer is not to be disturbed lightly nowadays. I will deliver the stocks, but whether they will come by wheelbarrow or by taxi I cannot foresee.

Those scrubbed outer cases are now dry, and we may paint them. A good white enamel paint will last for two seasons. Contrary to most teachings I paint over the whole surface of all floorboards, and after testing every kind of colour or tint I find white is as attractive to honey bees as any other. Hives painted white are always cool to the sense of touch even when under a hot summer sun.

But the luxuries of the amateur are not for the commercial bee-keeper, D. B. The bee farmers who run the largest bee farms in Cambs. have all their hives painted a solid black. Yes, we have several 200 bee stock farms within a few miles of the town, and I hope to go the rounds with you this summer. A small apiary takes up very little time after it is on its way. During the honey flow there will be week after week when 5 to 10 minutes spent in adding supers will be all we shall have to devote to our bees. They know their business better than we do, having been at it, may be, a couple of million years or so. If we supply them with what they need a little ahead in time they will do the rest.

Why do I scatter sawdust over the wet paint on the alighting-boards? I am glad you asked that question, D. B.

On a warm morning after a cool night get up early and take a look at the front of your hives. The moisture in the warm air flowing from the entrances will have condensed into a film of water on the cold, painted alighting-boards. As the eager worker bees rush out they go head over heels on to their backs into this water, and their wings become as if glued down to the smooth surface of the paint. S H. SMITH.

May 4, 1922.

(To be continued.)

Middlesex Bee-Keepers' Association.

A garden meeting and demonstration will be given by Mr. Herrod-Hempsall at Harley Lodge, Private Road, Enfield, on Saturday, May 13. Lecture, 4 p.m.; tea, 5 p.m.; demonstration, 6 p.m.

North Cheshire Chat.

Weather conditions have somewhat improved since the week-end. Wet on Good Friday and on Easter Sunday kept the bees at home, so I suppose in that sense they had an holiday. Wednesday and to-day (Thursday) have been sunny, so they have been busy on the "palms." No fruit blossoms are open yet, although the cuckoo is reported to have been heard this morning. One or two swallows have arrived, but truly they do not make a summer. The field-fares are still with us in flocks. I like to see them depart for the North the beginning of this month. We seldom get real spring-like weather until they leave us for good. One wonders, do they sense that the weather in their breeding haunts is not congenial, or do they go and see, and if not to their liking return South again? The migration of birds is an interesting problem.

Labelling Honey with the Country of Origin, and the Price of Same.—With reference to my kinsman's notes on this subject, I should like to say a few words, as I have been thinking a good deal on the subject of late. Readers please note that until I saw his views in the "B.B.J." I had no idea of them. We have not corresponded on the subject, or held any conversation thereon, so there can have been no collaboration. We have not seen each other since the war, when we met on the King's highway; he going on leave and I returning to duty. We had five minutes' conversation, and we never mentioned bees.

I am glad to note that a representative committee was chosen at the Reading Conference to deal with the labelling of foreign and Colonial honey, and, of course, British too Such a thing is overdue. I hope all Associations will strengthen their hands so that they can bring pressure to bear in the right quarter.

With regard to the price of honey, I am inclined to agree with my kinsman that we are rather disposed to wait too much for it, especially when asked to quote for bulk. I agree that it costs a great deal more to produce owing to the much greater cost of bees, hives, and appliances than in pre-war times, but I am inclined to the belief that English honey will have to be produced for sale at a cheaper rate than has obtained of late years, if it is to compete with the best Colonial honeys. The American apiarist is selling at about the equivalent of 7d. per lb. for the best grades, as I figure it out (*American Bee Journal*, November, 1921). His appliances cost him about half what we have to pay. On that basis the case quoted at £125 per ton is somewhere near the—shall we call it—world value of good honey. There is another basis on which the value of honey might be gauged, viz., the price of sugar. I suggest that three times the price of sugar, plus the cost of container and bottling, is somewhere near a reasonable figure for extracted honey. Section honey usually commands a little more than ex-

tracted. Bee-keepers, like every other producer nowadays, must be prepared to sink prices if they are not going to kill the demand for British honey. Increased production per hive must be aimed at for maintenance of profits, by keeping only proved honey producers, yearly re-queening, and intelligent and intensive manipulation. My time is spent. I will say something further on this matter in my next notes, meanwhile I expect a wasp's nest about my ears, if not an hornet's.—D. J. HEMMING, Appleton, Warrington, April 20, 1922.

Cotswold Notes.

INTRODUCING FERTILE QUEENS.

As the time is now approaching when fresh colonies will be established some further remarks on queen introduction may be timely, especially for beginners.

There is nothing more susceptible to strange moods than a bee colony when deprived of its reigning queen.

Even though the bees appear in a hopelessly queenless condition they may—if conditions are unfavourable, or sufficient precautions are not taken—reject any fresh queen given, or so roughly handle her as to render her practically worthless.

Particularly will this be the case during periods of dearth between honey flows or early and late in the season. Nuclei and small stocks possessing a larger proportion of young bees than adults are naturally easier to re-queen than full colonies, where those conditions are reversed.

There is also a marked difference between races, gentle kinds being the best. Before a queen can be introduced, the old one must, of course, be removed, unless she was lost through natural causes.

This should be either done just prior to giving the fresh queen, or some eight days previously, in which case all queen cells prepared during the interval must be carefully searched for and removed. Athough this method is by far the safest, it is usually necessary to provide a fertile queen as quickly as possible after queenlessness has been discovered.

To lose a week's supply of eggs is a serious setback to any stock during the period before mid-summer.

Most bee-keepers are familiar with the ordinary mailing cage adapted for use as an introducing cage in which the queen is liberated by the hive bees eating a passage way through the candy at one end.

This is a satisfactory method, and is often used to save trouble; but it is safer—especially if the queen has been confined for more than four days—to remove the queen and introduce her alone, or with a few *recently emerged* workers from the stock in a new cage.

I myself frequently employ a new type of "push in the comb" cage in which the queen is caged on a comb containing honey and emerging brood.

This has rarely been known to fail. In any case it is as well not to disturb the colony for four or five days after the queen would be released.

Occasionally, if young brood is present, the bees may make little effort to liberate the confined queen, preferring to build queen cells.

In this case the queen will eventually be balled. The best thing to do is to pull down all cells and re-cage the queen. The bees will then accept her without demur on the second attempt.

To those who experience any difficulty in finding queens I would say "Place two or three clean, bright combs in the brood nest of a colony consisting of light coloured bees."

There is every chance of the queen being quickly found laying in one of these several days afterwards.

Queen-finding is entirely a matter of practice aided by keen eyesight, and the foregoing is a simple way of gaining some experience.—A. H. BOWEN, Cotswold Apiaries, Cheltenham.

Norwich Notes and Notions.

There is a controversy in the local Press as to whether a year of drought is as bad for honey as a wet one.

Last season the drought did not affect the bees till June. Those who were favoured with strong stocks early for the fruit and early clovers the bees got a good surplus. All the fields about here after June were the colour of sand dunes—no second clovers and few flowers. The stocks in many instances robbed other sources and colonies, hence some stocks got stores. I well remember seeing wasps and bees in abundance on our market stalls, taking a sip of the over-ripe juices of fruit.

The lime flowers did not yield, as they were so scorched. The heather on Mousehold Heath was practically nil. The season before, a wet one, it was a picture to behold, the bees gathered much store during the short burst of sunshine. In sheltered localities with ample bee pasturage near at hand, even in a very wet season, I know bees got a good surplus, whereas open and exposed fields with plenty were deserted. The same in a year of drought, localities that laid high and dry were scorched, the sheltered valleys often had night dews to favour them, this is why some get surplus and others none; it's a question of locality all the time.

I well remember being asked for new season's honey once in February, and was so bothered that I extracted from the brood nest outside combs. Never again! After all, even if the honey looks all right, the aroma and wax in the brood nest are not very exquisite, also honey from the brood nest cannot be expected to be so nice as, say, a section; that's the reason sections generally sell well.

To tell folks that a pound of honey is equal to so many pounds of meat, eggs, etc., is beside the mark. Persons are like goats, we

all like a little of everything nice for a change, so all foods are needed to get the essential vitamines, etc., for health and pleasure.

The old stunt is still with us: "Get imported Italian queens, and, hey presto! no disease," and, of course, no legislation is needed. If this was true the bee disease problem would have solved itself long ago. Italians imported must be strong stocks to winter well. I like Carniolans, and I fancy that they suit our climate best, also they fulfil a long-felt want of many who desire a bee, like our native, with easier handling.

I noticed one of my stocks tackled a conceited rat, who died with a swelled head outside the hive.

Many will appreciate a reduction in railway freightage, also more careful handling of goods. I have had candy bundled in my door like so much coal, foundation smashed, also frames brought to me like a bundle of firewood. These were anxious times, no wonder trade is bad, and any person making an effort for the betterment of themselves and others is looked upon with envy and jealousy, and taken for granted that a few examples given us in the papers of the ease and profit of bees looks well on paper, but does not pan out for all. Bees have big possibilities, and one must make the best of the few opportunities, if they are a few, then success is assured with pleasure and profit, if they will not buy you your house or land, the money and honey is a good stand-by for the house. The worst year in a fair locality, if you study the bees, will not leave you in debt. — A. TROWSE, Norwich, February 11, 1922.

Bee Notes from Derbyshire.

I do not know if it is any use writing any more notes to "B.B.J." when there are already two long rambles there in pickle, but I feel that a few notes on the extraordinary season would not be out of place. Where has our long-delayed spring got to? To come up to daylight, on April 27, from our lamp cabin window, to take a glance at the hill, for 20 miles or more shrouded in two inches of snow, makes one wonder when this long-drawn-out winter will come to an end. These persistent nor'-east winds keep the bees at home when the larder is bare of pollen, and I never saw combs so bare of pollen at this time before. The combs seemed clogged with it at the back end, but the bees must have used more than ordinary, for a month ago I had doubts of one stock that was wintered on pure heather honey, nine combs solid, I might say. Not caring to look in the hive this cold weather, I felt I must examine this one. I was only just in time. The bees covered five combs, no brood, only a few eggs, and not a vestige of either honey or pollen in all the nine combs. I thought how lucky; one more day and I would have been too late. Result: A hasty raid on the next hive for a comb of stores, and a feeder on the same night. Yesterday, as I transferred to a clean hive, I saw three combs of brood (well, with brood in). Out of six hives spring cleaned I only came across a bit of old pollen on one comb yet, every comb seemed cleared out of it, and some hives had some in last autumn. I had visions of a lot of pollen-clogged combs to deal with this spring; but no, bees are hanging fire to breeding because of the scarcity of it. Just fancy! 1st of May here, and only brood on four combs in the best of stocks, and my bees are near to pollen all winter with the cut flowers in the cemetery. But with the wintry aspect outside they could not even fly over the wall the 100 yards or so to fetch it from there. How are hives looking in less favoured positions?

I was standing by a large box tree in there yesterday, and as the sun shone between the clouds, the bees popped over that wall to it till it was literally alive with them at times. There are seven or eight of them; some are over, some at their best, the others a few days later. I never noticed bees on them before, but these are one mass of bloom this time, as is also the flowering currant, just opening out. The holly is the same, and will be later on; gooseberries are just opening their first blooms; while, as a year ago I had seen May bloom out at this time, the hedges are quite bare in places yet.

I have been taking notice how hives wintered on different foods, two hives wintered on honey—one heather and one clover. I found both cleared out first week in April. Two others, with honey and 12 lbs. of sugar each, have plenty left yet; while two more, on eight combs each, one in a W.B.C. hive and the other in a tomato box, were fed solid on sugar, have plenty to last till June. So that shows eight combs solid of sugar syrup will last bees longer than nine of honey, either heather or clover, and the bees in tomato box are about my best lot. Two others were somewhat similar, while the other two died out about Christmas time. Considering I have had "I.O.W." disease among them, and only two died out of ten, I think things are improving a little. I have only come across three lots this year so far gone under with "I.O.W.," so I think it is dying down in this part. There seems to be several cases of queenless stocks about. Hoping we shall soon have a turn in the weather, with more signs of that bumping crop we are all looking forward to for 1922,

TOM SLIGHT

Bees in the Bonnet.

In Kenya Colony, East Africa, a man recently had a whole swarm of bees in his bonnet—the bonnet of his motor-car. He left the car outside the post-office in the town of Nairobi; when he came out after a little time, he was dismayed to find that a swarm on the look-out for some resting place had chosen the front of it, where the engine is, to settle down in. They had got in through the slits of the cover, and it was impossible to get them out. He could not drive the car—it had to be pushed home. Whether he took the swarm and put it into a hive is not known; he may at least have had some honey to make up for the trouble. — From the *Christian Herald*.

New Bee-Keepers' Society.

MEETING AT ROCHESTER.

As a result of the recent controversy and the expulsion of Mr. George Bryden from the Kent Bee-keepers' Association, on Saturday evening, April 29, at Rochester Guildhall, the Medway Bee-keepers' Association was successfully launched at a largely-attended and thoroughly representative meeting.

Prior to the meeting, a lantern lecture was given by Mr. W. Herrod-Hempsall, hon. secretary of the British Bee-keepers' Association. The chair was occupied by Dr. A. C. A. Packman, J.P.

Mr. Hempsall's lecture was entitled "Bees for Pleasure and Profit," and it was indeed a delightful one—so different from that technical kind that bores an audience "stiff." In opening, the lecturer explained that he was in this dilemma, that he had to adapt himself to the novice as well as to the experienced apiarist, in which he succeeded admirably.

After the lecture, Mr. Hempsall replied to a number of questions put him.

Dr. Packman moved a vote of thanks to the lecturer, and Mr. A. R. Castle seconded. The latter referred to the fact that the lecture had been free from that technique which had characterised lectures in the past, made them unreportable in the local Press, and not understandable to the majority of the audience. What was the good of telling people how many hairs there were on a bee's leg?

In reply, Mr. Hempsall went back 20 or 22 years ago, when he first met Mr. Bryden. He attended and lectured at meetings at Crayford, when the first consisted of an audience of about four. But gradually through the work of Mr. Bryden, Mr. Stoneham, and Mr. Bates, and also by the liberality with which these gentlemen supplied much of the funds out of their own pockets, as well as carrying out the organisation, an Association was built up which spread all over the county, so that the bee-keeping in Kent was mainly due to those gentlemen, and more especially to Mr. Bryden, who had laboured hard, conscientiously, and continually in the management of every department of the Association, and more particularly by his practical assistance and sound advice to members with their bees. Mr. Bryden was now doing good work at Aylesford among those poor, maimed, crippled, and winged fellows who had fought for their country. It was quite a revelation to see the interest they took in the instruction imparted by Mr. Bryden.

Votes of thanks were then tendered to the chairman and the lanternist (Mr. W. Jones, Gillingham).

In opening the after-meeting, Mr. Bryden said that he stood before them as the criminal, but he was happy to say that he was now released and out of prison. That night there sprang up a new era and a new Association. He was at liberty to enjoy a free country and a free Press. The large audience that evening was encouraging to him, for it showed appreciation for the little he had done. There was no need to enter any further into the recent controversy, but this he would say: That he was going to carry on the new Association for the benefit of the members, and not for his own, and for the improvement of bee-keepers and bee keeping. There was any amount of talent in this county, but it had been stinted during the past couple of years. They had that day read that the Kent Bee-keepers' Association had resigned from the British Bee-keepers' Association; thus the new Association could now lead the way, and, by God's help, it would. (Applause.)

Captain Leech proposed, and Mr. E. Semper seconded, that the new Association be formed, and the motion was carried with one dissentient, Mr. W. H. Cook (chairman of the Northern Division, K.B.A.).

Mr. Cook, addressing the meeting, said he was against the proposition because he had been for reconciliation. He felt it very keenly, because a house divided against itself could not stand. It was up to them to put matters straight, not to run away and form another Association. The road was still open to Mr. Bryden to come back, but he must take the first step. Mr. Bryden said that he was now free. He (the speaker) doubted it. Mr. Bryden was now taking a step that might lead him farther into the mire.

Mr. Bryden said that he must contradict Mr. Cook. The way was not open to him and had never been open to him in any way whatever. It was the followers who had pressed him to form the new Association.

Mr. Semper said that the Kent Bee-keepers' Association had never defended themselves, but had merely expelled Mr. Bryden. How was it that similar punishment had not been meted out to others, who, prior to Mr. Bryden, had written to the bee Press criticising the work of the K.B.A.?

Mr. Cook replied that he knew nothing about it.

Many of the old arguments were being revived, when Mr. Castle saved the situation by reminding the chairman that all this was out of order.

The meeting then proceeded to elect a council of about twenty members from various parts of North Kent (including Sheerness), and Mr. Bryden announced that these gentlemen would receive information of the first council meeting within the next few days, whilst periodically during the summer it was proposed to have lectures and demonstrations at the residences of various well-known apiarists in the county.

Intending members are asked to communicate with George Bryden, Hon. Sec. (*pro tem.*), 46, Star Hill, Rochester, until full particulars are available and will be issued in due course.

Cheshire Bee-Keepers' Association.

ANNUAL MEETING.

The annual general meeting of this Association was held at the Holborn Café, Chester, on Saturday, April 29, 1922.

Mr. G. W. Malcolm, of Northwich, in the chair.

The large number present and the keen interest and enthusiasm shown was evidence of the satisfaction felt generally in the work of the Association; in fact, the only criticism offered applied to one or two local secretaries who will have to waken up to keep in line with the majority.

The following officials were elected:—President, His Grace the Duke of Westminster; hon secretary and treasurer, Mr. E. W. Franklin, Mouldsworth; assistant hon. secretary and librarian, Mr. W. Stokoe, Romiley; hon. auditor, Mr. John Tonge; delegates to B.B.K.A., Major Garratt and Mr. A. M. Sturges; committee, Messrs. E. H. Davies, T. A. Jones, J. Acton, A. J. Blakeman, A. Newstead, A. Langford, J. Clark, A. D. Tobler, T. Burgess, F. W. Fenn, W. Bradburn, W. Wilde, J. Stonely, J. Cadman.

The chairman alluded to the great loss the Association has sustained by the death of Canon Evans, who had been chairman, lecturer, and judge ever since its formation in 1890, and at the chairman's request the members stood as a token of respect and to signify their acceptance of his proposition that a vote of sympathy with his widow and relatives be passed.

In making his report, the hon. secretary and treasurer, Mr. Franklin, said that the past year would long be treasured in memory as being the best on record, 234 lbs. and 4 nuclei had been taken from one stock belonging to a member, and many other cases of over 200 lbs. and increase were known to him. He, himself, had taken over 200 lbs. and 5 nuclei from a single stock, the profit on which for the year was £30. The membership of the Association was still increasing, and numbered now over 400. With regard to disease, he thought that "day by day in every way we were getting better and better." Winter losses had been comparatively few.

The finances of the Association were in a sound condition, and although there was a debit balance of £14 on the year's working there was still a general balance in hand of £73. The deficit was largely on account of increased printing and postage expenses. The report which used to cost about £4 to print now cost £20; of course, the report is larger, and is considered to be one of the best in the county.

Owing to the support from the County Council, the expert visitation of apiaries had been very thoroughly done, as many as nine visits had been paid in some cases. Beginners purchasing county nuclei had special attention given in the autumn, and this help ensured the bees wintering successfully, which would not have been the case in some instances had not this precaution been taken.

The shows were also a credit to the county and the Association, both as regards the number of entries and the quality of the honey exhibited; in fact, some of the sections were fit for any show bench in the kingdom.

It was announced that the Association show for the year would again be held at Chester, under the auspices of the Chester Agricultural Society, on August 30. Special prizes will be given there, also at Bramhall on September 3, and at Altrincham September 27. The shows at Wrexham and Knutsford had also been mentioned, but no decision had been arrived at yet.

After tea, Mr. A. M. Sturges, one of the vice-presidents, gave a lecture on "Acarine Disease."

A queen breeder of renown, and one whose independent investigations into the subject of Acarine disease had been of great value in the progress made during the last twelve months, his lecture was listened to with the closest attention and interest.

A vigorous discussion followed, and brought one of the most successful Association meetings ever held to a close.—*(Communicated.)*

Bee Shows to Come.

A nominal charge of 2s. 6d. is made for notices (not exceeding 7 lines) in this column, 10 lines charged 3s. 6d. up to 15 lines 5s., which covers cost of insertion from order till date of show. Cash should accompany orders for insertion.

May 24-27 at Guildford.—Surrey B.K.A. Show. Two Challenge Trophies, Apis Club Silver Medal, B.B.K.A. Silver and Bronze Medals and Certificate, Surrey B.K.A. Silver and Bronze Medals, Open Classes Honey, Wax, Appliances, etc., Demonstrations, Lectures, etc.—Hon. Secretary, W. E. Hamlin, 43, Norbury Court Road, Norbury, S.W.16.

May 31.—Hunts Agricultural Show, Huntingdon. Bee Section under the auspices of Hunts Bee-keepers' Association. Open Classes for Combs and Extracted Honey and Wax.—Hon. Sec., F. Tunnington, Thrapston Road, Brampton, Huntingdon. **Entries close May 24.**

June 7 and 8, at Chelmsford.—Essex B.K.A., in conjunction with the Essex Agricultural Society's Diamond Jubilee Show. Apis Club's Silver Medal, Essex Agricultural Society's Silver and Bronze Medals, and also the B.B.K.A. Medals and Certificate, besides many prizes All Classes Open. Lectures and Demonstrations on both days in the Bee Tent by the County Bee Instructor.—Schedules and Entry Forms from Secretary, Essex Bee-keepers' Association, Rawreth, Wickford, Essex. (Stamped, addressed envelope, please.)

Royal Show, Cambridge, July 4 to 8.—Over £40 in prizes. All classes open.—Schedules and all information from Mr. E. C. R. Holloway, Burwell, near Cambridge. **Entries close May 20.**

July 26-27, at Cardiff, Sophia Gardens.—Glamorgan Bee-keepers' Association, in connection with Cardiff and County Horticultural Society's Show. Open Classes. Special prizes: Taylor's W.B.C. Hive and Apis Club Bronze Medal.—Schedules from Secretary, Chas. F. Davies, 5, Borstal Avenue, Cardiff.

September 16 to 22.—British Bee-keepers' Association Annual Show at Grocers' Exhibition, Royal Agricultural Hall, Islington, London.—Schedules from Hon. Secretary, B.B.K.A., 23, Bedford Street, Strand, London, W.C.2. **Entries close certain September 4.**

Special Prepaid Advertisements.

One Penny per Word.

Orders for three or more consecutive insertions in "The Bee Journal" entitle advertisers to one insertion in "The Bee-Keepers' Record" free of charge.

Advertisements must reach us NOT LATER than FIRST POST on MONDAY MORNING for insertion in the "Journal" the same week.

PRIVATE ADVERTISEMENTS.

FEW used Hives, 15s.; Shallow Frame Boxes, 8 built combs, 10s. 6d.; Section Racks with 6 metal separators, follower and spring, 2s. 10d.; Metal Separators, 1s. dozen; all warranted good condition.—HILLS, Alton. e.46

STRONG, healthy 8-frame Stocks, brood in all frames, 1921 Queens, Simmins' strain, 60s., carriage paid; May delivery; boxes to be returned. —MAGSON, Kirkham, Lancashire. e.47

GET BETTER BEES by having better Queens. Tortora's choice fertile Italian Queens are the best; prices now, May 9s. 6d., June 8s. 6d.; safe arrival guaranteed; reduction for five.—Sole Agent, HULBERT, "Châlet," Warwick Road, Ofton, Birmingham. e.48

STOCK of pure-bred Italians, re-queened last summer direct from Penna, £4 10s., carriage forward; box to be returned.—MISS LAWRANCE, Rose Cottage, Tenterden, Kent. e.49

MAN requires situation as Bee-keeper; help in garden or nursery; only living wage required. Box 66, B.B.J. Office, 23, Bedford Street, Strand, W.C.2. e.50

SECTIONS.—Parchment Board, 8s. 6d. for 100; 4th plated Wire on reels, 11d. each; Queen Excluders, wire, 1s. 6d. each; Swarm Catchers, 3s. 6d.; all post extra.—BUCKINGHAM BROS., 82, Warwick Road, Luton. e.52

HAVE a few more strong Stocks Hybrids on six standard frames, wired combs, 1921 Queens, good working strain, for immediate delivery, 50s., carriage paid.—WM. CHANNELL, Grove Apiary, Histon, Cambs. e.53

PACKAGE BEES wanted, 2-lb. lots, without queens.—HITCHIN, Marlboro' Road, Long Eaton. e.56

I HAVE still a few 8-frame Stocks Italian Bees for Sale at £3 15s. per stock, f.o.r.—DOBSON, Hunton Bridge, Herts. r.e.57

REDUCING APIARY.—Strong, healthy Stocks on 7 and 8 frames, 1921 Queens, 50s., or Swarms booked for June.—JOHN BRAY, Covenham, near Louth, Lincolnshire. e.58

NATURAL healthy Dutch-Italian Swarms, 30s.; second, 25s.; cash with order; box returnable.—J. BOYES, Bee-keeper, Snainton, Yorks. r.e.59

HIVE BARGAINS.—Surplus Hives, Excluders, Clearers, etc., cheap, clean, and good.—Particulars, Box No. 67, B.B.J. Office, 23, Bedford Street, Strand, W.C.2. e.60

FOR SALE, several strong Stocks of Bees on 10 frames, £2 10s., hive included; also Extractor, Ripener, etc., all new condition.—DR. WOODFORDE, Ashwell, Baldock, Herts. e.61

FINE Cambs. Swarms, 30s.—S. H. SMITH, 30, Maid's Causeway, Cambridge. e.71

FOR SALE, three strong Hybrid Italian Stocks on 8 combs, £3 each; guaranteed healthy.—ROUND, 38, Arngask Road, Catford, S.E.6. e.72

HONEY.—Three 28-lb. tins, 28s. each; tins returnable; carriage extra. — GARNER, Wymondham, Norfolk. e.74

EXTRACTOR, Lee's Cottage, for Sale, perfect condition, no rust, 32s., carriage paid.—EVANS, Lattiford, Wincanton, Somerset. e.75

FOR SALE, three good Stocks and Hives, two 1921 Queens.—BRINKLOW, Hadley Wood. e.76

BEES.—Two Stocks very strong Italian, two W.B.C. Hives, Extractor, many Accessories. Offers.—J. JAQUES, 66, Grove Road, Wanstead, E.11. e.77

STRONG NATURAL SWARMS of healthy Hybrid Italian and Dutch Bees, 25s., carriage paid; box free; cash with order.—W. WOODLEY, Bee Farmer, Beedon, Newbury. e.78

NATURAL SWARMS from bar-frame hive, 30s each. Orders booked.—NORTH, Notley, Witham, Essex. r.e.80

FOR SALE, three good Stocks of Bees on 10 frames, 65s. each.—WATTS, 77, Church Road, Northwood, Middlesex. e.83

SURPLUS SWARMS, Italians, 8s. per lb. Orders in rotation.—OSBORN, Glenficid, Bideford. e.84

65/- STOCK OF BEES, 10 frames, standard size, carriage paid.—Box No. 68, B.B.J. Office, 23, Bedford Street, Strand, W.C.2.

A FEW strong, healthy Stocks of Bees for Sale, Natives, on 9, 10 and 12 standard bars, price from £4 each; 10s. on travelling box, refunded on return. — WOOD, Cowmires, Galphay, Ripon, Yorks. e.r.86

ITALIAN HYBRIDS, Simmins' strain, 6-frame Stock, 60s.; box returnable. — HUGHES, Capel-Hendre, Pantyffynnon. e.3

NATURAL strong, healthy Italian Swarms, 20s. to 25s.; package returnable.—CADMAN, Codsall Wood. r.e.4

WANTED, Stock pure Carniolans (1921 vigorous Queen), with W.B.C. Hive. Exchange Iron Age combined garden hand drill, hoe, etc. (cost £9).—BIRKETT, Beddlestone Farm, Brook, Ashford, Kent. e.5

SWARMS from healthy Stocks, May and June, 25s., carriage paid. Cash with order.—ELDRIDGE, Nortons, Battle, Sussex. e.8

SWARMS, May delivery, 7s. 6d. per lb.; established on 5 frames, 45s.—BARRETT, Sunnyside, Cecil Park, Pinner. r.e.6

STRONG STOCKS HYBRIDS, 75s.; Hive, 20s.; box 10s., returnable.—REV. COOPER, 62, Park Hill, Carshalton. r.e.15

STRONG HEALTHY SWARMS for Sale from mid-May, 27s. 6d., carriage paid. Cash with order. Boxes and frames returnable.—PULLEN, Ramsbury, Hungerford. r.e.37

10-FRAME STOCKS, Italian Hybrids, in nearly new Hives, Lee's Improved, complete with crates, sections, or drawn-out shallows and excluder, £5 2s. 6d., carriage paid; guaranteed healthy.—TUNMER, Chalfonts, Leiston. r.39

SWARMS, May 10s. lb., June 8s. lb., Dutch, guaranteed healthy (always buy by weight). Orders in rotation. Note extract from letter received: "Up to the time of the introduction of these Dutch bees our average yield per hive was not more than half of the record yield given by these Dutch bees."—WOOD, Colewood Apiary, New Road, Mitcham, Surrey. r.e.41

2¼ CWTS. of pure Essex Honey in tins, 28 lbs. 4 £2, 1 cwt. £7 15s., the lot £17. Also strong, healthy Stocks in good Hives, £5 5s. each, or near offers; carriage paid for cash with order.—TUNMER, The Apiary, Maldon. r.d.94

FOUR 28-lb. tins Honey. Offers wanted.—J. H. RUMBALL, 35, Benslow Lane, Hitchin, Herts. d.78

IN CONSEQUENCE of the Herefordshire County Council giving up their Restocking Scheme, the Apiary is for disposal. Italian Hybrids, all good, healthy 10-frame Stocks, all 1921 Queens, either with or without hives, without hives sent in special travelling box carriage paid to nearest station, 70s.; box charged 10s. extra, which will be returnable and cash allowed when received. Also 200 drawn-out Shallow Combs, 1½ top bars, perfectly healthy, 18s. 6d. per dozen, carriage paid. Orders booked in rotation. Cash with order.—J. ARNFIELD, Arncroft, Breinton, Hereford. r.d.17

SELL.—Rotax all-brass Motor Car Head Lamps, self-contained acetylene, very powerful, 30s. the pair; two small powerful Acetylene Brass Head Lamps, with separate generator, suitable light car or cycle car, £3 the set; Austin Rear Wind Screen, mahogany framework, £7; Mills' Automatic Acetylene Generating Plant, suitable for 10-roomed house, £6; quantity of Acetylene Gas Brackets and Chandeliers, prices with particulars; small folding Magic Lantern, 30s.; single barrel .410 Gun, 30s.; motor cycle all-rubber Ponco, reaches to ankles, wind- and weather-proof neck and sleeves, 50s.; all carriage forward.—HERROD-HEMPSALL, Old Bedford Road, Luton, Beds. c.77

SWARMS.—Book now! Hybrid Italians, 30s. Original stock from Lincs. Association Restocking Scheme. Inspection of stocks invited, Sunday excepted. Box 5s. extra, returnable.—R. C. SILVERWOOD, Bottesford, Notts. r.d.46

HYBRID ITALIANS.—A few surplus Stocks, very prolific, good workers, gentle; 10 frames, £4; box to be returned.—Box 62, B.B.J. Office, 23, Bedford Street, Strand, W.C.2. r.d.59

SELL a Lee's 12-frame W.B.C., second-hand, one lift and one shallow frame, supers, 30s.; disease free; carriage forward.—Box 65, B.B.J. Office, 23, Bedford Street, Strand, W.C.2. d.97

HYBRID Italian Swarms, healthy, May and June 25s., cash with order.—J. M. WILKIN, Pymoor, Ely, Cambs. e.90

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THE WISE BEE-KEEPER looks for quality. The South Hampshire Apiaries breed only from the very best strains. Result: Quality and satisfaction. Beginners' Outfits from £5.—All communications, H. E. NEWTON, New Milton, Hants.

GOLDEN ITALIAN QUEENS.—These superior British-reared Queens need no recommendation. Goldens, 10s. 6d.; Three-bands, 8s. 6d. each. Queens are heavily booked for May. New orders can only be accepted for delivery in rotation commencing June.—COOMBER, Queen Breeder, 64, Ronald Park, Westcliff-on-Sea. e.51

PURE ITALIANS, 1922 Penna or Buckfast Queens.—4-frame Nuclei, 45s.; 6-frame, 50s., carriage paid, June-July; 10-frame Stocks, 1921 Queens, immediate delivery, 75s. — WADHAM, Gold Street, Cardiff. r.e.62

FREE.—1 lb. "Airco" Foundation with every Dutch Skep of Bees (soon swarm), £3, carriage paid.—LONGLEY, 35, Tharp Road, Wallington, Surrey. e.2

COLONIAL HONEY.—Australian white, 60-lb. tin, 38s., two 60-lb. tins, 75s.; finest West Indian, 56-lb. tin, 40s., two 56-lb. tins, 71s.; carriage paid.—LONDON TRADING AGENCY, 32, St. Mary Axe, E.C.3. e.44

"THE UNITIVE" is a collateral equipment, *i.e.*, the Lift may also be the brood chamber when fitted with removable inner walls, and will interchange with the brood chamber upon the floor-stand, as for Doubling for Increase, or Queen-rearing over excluder.

It is adaptable for 14 in. x 8½ in., 14 in. x 12 in., 14 in. x 11¼ in., and 16 in. x 10 in. brood frames, and the shallow chambers can also be combined and will then take the inner walls for brood frames as well as their own respective super frames, if choosing to work thus rather than with the separate internal racks packed around for heat conservation.

Particulars of the Convertible Unitive, the "J.B." Double-Purpose Rack, and other Specialities for 4d. stamps.

JAMES B. BALLANTYNE,
— HAZELBANK, LANARK.
e.63

GRAFTON QUEENS AND BEES are guaranteed the very highest grade. Trial will convince you. Early Nuclei, 3-frame £2, 4-frame £2 10s., carriage paid.—Full particulars, MASOM & HEDLEY, Grafton Regis, Stony Stratford. e.64

"IT MUST BE COTSWOLD."—Famous Queens of reputation raised by Specialist under ideal conditions. Just order one, 11s. 6d.; three, 31s. 6d. —BOWEN. e.65

SAFE QUEEN INTRODUCTION!—Send 2s. 6d. for Bowen's "Simplex" Cage. e.66

"BOWEN" WIRING BOARDS makes frame wiring a delight. Order one now, 6s., post 1s. 3d. e.67

DON'T GET STUNG!—Wear a "Bowen" Veil, aids eyesight, 2s. 2d.—BOWEN, Queen Breeder Cheltenham. e.68

ITALIANS, Nuclei, genuine 1922 Penna Queens, 3-frame, 40s.; box 10s., returnable; Penna 1922 Queens, 11s. each, delivery end May.—ASTBURY, "West Farleigh," Wylde Green, Birmingham. r.e.69

BRITAIN'S BEST BEES, as supplied by me to the Board of Agriculture. 6-frame Stocks, 45s.—LEE, the Beeman, Burgess Hill, Sussex. r.e.87

SWARMS, Italian and Dutch Hybrids, 25s. each, carriage paid; Stocks from 50s. 17 years' advertiser in "B.B.J."—MATTHEWS, 25, Cray Road, Crocken Hill, Swanley, Kent. e.54

SWARMS, Italians, good workers, free from disease, 30s. and 21s.; Stocks, 60s.; carriage forward.—GIBBS BROTHERS, 7, High Street, Albrighton, Wolverhampton. r.e.55

BEE-KEEPING.—Instruction by Correspondence Courses. Difficulties solved for beginners. Students thoroughly prepared for the British Bee-keepers' Association Examinations: (a) Preliminary, (b) Intermediate, (c) Final.—For particulars apply to PENNINGTONS, Horticultural Tutors, 264, Oxford Road, Manchester.

"MELAPIS" BEES.—Sales through advertisement none. Friends who have had them before, together with others who have noted their production, have ordered 166 Queens for May delivery. Bees that deliver the goods beat all advertising. See our adverts. of April 27 and May 4.—THOMAS, Bartle Cottage, Exning, Suffolk. e.79

STOCKS, Italian or Dutch Hybrids, 65s.; no disease; carriage paid.—GREEN, Bee-keeper, Laindon, Essex. e.88

SOME LEADING WRITERS in three Continents contribute to the May number of
THE BEE WORLD,
which will be on sale on May 15. Eminently practical and scientific articles that are no less indispensable to the honey producer than to the student of bee-keeping. This number completes the third volume, a full set of which may be obtained from the "B.B.J." Office at 10s. 6d., post free. Send your order before it is too late! A few separate numbers belonging to the third volume are also available at 10½d. each, post free. Those intending to join THE APIS CLUB should apply for membership direct to its offices at Benson, Oxon. Annual fee, 10s. 6d., commencing the month of joining. It includes free delivery of THE BEE WORLD and several other advantages. Every live bee-keeper should be proud of joining this world-wide movement. e.73

AN AMBROSIAN STOCK means a heavy honey crop.

BARGAINS.—Having bought another Apiary with Stocks, now surplus to requirements, we offer these at bargain rates. Hives from 6s., Excluders 10d., etc. Stamp for list saves pounds.—AMBROSIA APIARIES, S. Farnboro', Hants. e.81

MAY SWARMS, 25s.; Queens, 7s. 6d.; Nuclei, 30s.—WOODSFORD, Expert, Chilworthy Apiary, Chard. r.e.28

TO BEGINNERS and others wishing to increase their stock.—Italian Hybrids. 3-frame Nuclei, delivery about June 10 next, 1922 Queens, price 35s. each.—HOSEGOOD, Beecot, Cliff End, Purley, Surrey. r.e.11

ITALIANS. Nuclei, 1922 Queens, 3 frames, May 40s., June 32s.; Colonies, 6, 8, 10 frames, 50s., 62s., 73s.; returnable crates.—ATKINSON, Fakenham. r.e.32

CHOICEST BRITISH GOLDEN 10-frame Colonies, 80s.; 6-frame, 58s.; returnable crates.—ATKINSON, Fakenham. r.e.33

DESPATCH pure Italian fertiles by return post.—ATKINSON, Fakenham. r.e.34

FINEST ITALIAN NUCLEI, with Cannell's imported 1922 American Beauty Queens; satisfaction absolutely guaranteed; May, 3-frame 45s., 4-frame 55s.; June, 40s. and 47s. 6d.; carriage paid; travelling boxes returnable.—HOGAN, Boxford, Suffolk. d.71

THE 1922 15-frame "Thames" Hive for 28s. r.d.72

FINE, healthy, vigorous, natural-reared "Cleopatra" Stocks from THE THAMES VALLEY BEES (Regd.), Teddington. r.d.73

In spite of the EVER INCREASING demand for our Appliances, we can give

PROMPT DELIVERY.

The demand is EVER INCREASING——

One of many unsolicited testimonials received daily :—"I will do my best to get all the orders I can for you after seeing the quality of your appliances."—W. A. L.

E. H. TAYLOR, Ltd., BEEHIVE WORKS, WELWYN, HERTS.

DUTCH BEES.—3- and 4-frame Nuclei, 30s. and 40s., packed with brood, June delivery, carriage free; travelling box 10s., returnable if carriage paid; guaranteed healthy and strong; cash with order.—E. LANG, 124, Canterbury Street, Chorley, Lancashire. r.e.70

BENTON QUEEN CAGES, complete, 6d. each, postage extra; to clear, 5s. 6d. per dozen; with candy, 1d. per cage extra. 56-lb. tin Light Wiltshire Honey. What offers?—ASHWORTH, Pound Street, Warminster. e.82

A FEW 8-frame Italian Stocks, immediate delivery, almost ready to swarm, 60s.; guaranteed healthy; travelling boxes 10s. extra, returnable. Twice as cheap as nuclei.—J. YOUNGER, 16, Maid's Causeway, Cambridge. r.e.25

STRONG, healthy 8-frame Stocks, Italian and Hybrids, immediate delivery, £3 each; first natural Swarms, Hybrids, June delivery, 35s.; all carriage paid; boxes free; approval; deposit.—JOSEPH DRAPER, Saw Mills, Aughton, Ormskirk. e.17

MAY SWARMS in new cane bound skeps, 37s. 6d., carriage paid, with super. All kinds of Skeps for Sale.—H. SEAMARK, Skep Works, Willingham, Cambs. e.30

SWARMS AND NUCLEI for Sale, Italian, Dutch and Hybrid; very best strains; lowest prices.—WILKES, Pelsall, Walsall. r.e.10

ITALIAN FERTILES, May, 10s. 6d.; 4, 38s.; 6, 56s.; 12, 96s Special quotations 25 to 100.—ATKINSON, Fakenham. r.e.35

STOCKS genuine Swiss Bees for Sale. Write for Descriptive Circular. — DAVIDSON, Forest Road, Burton-on-Trent. c.195

SWARMS BOOKED, May delivery. Italian, Carniolan, Dutch; low prices.—DAVIDSON, Forest Road, Burton-on-Trent. c.198

STRONG STOCKS healthy Dutch Bees in Skeps; reduced prices; immediate delivery. Write actual importer. — DAVIDSON, Forest Road, Burton-on-Trent. c.196

ITALIAN, Carniolan and Hybrid Stocks and Nuclei for Sale, strong and healthy, delivery May, low prices.—DAVIDSON, Forest Road, Burton-on-Trent. c.197

NUCLEI.—A limited number of 3- and 4-frame Nuclei for disposal, Hybrid Italians, healthy; 3-frame, £2; 4-frame, £2 10s.; June delivery; travelling box 10s. 6d., returnable.—Box 63, B.B.J. Office, 23, Bedford Street, Strand, W.C.2. d.65

SIX, eight, and 10-frame Stocks, packed with brood, bees, and young fertile Queen.—HARVEY, Apiarist, Andover.

SWARMS.—Any weight supplied at lowest rates with young fertile Queen.—HARVEY, Apiarist, Andover. r.d.90

Orders booked now for April Stocks. Catalogues now ready. PEARSON & GALE, Marlborough.

IMPORTED ITALIAN QUEENS, Penna or Tortoras, 9s. 6d., from May 14; Nuclei, 3-frame, 35s., headed imported Queens, May delivery.—HENSLEY, Luton Apiary, Chatham. e.42

ITALIAN QUEENS, "Mellona" strain, home-bred for producing strong, healthy, non-swarming stocks and bountiful honey harvests, 10s.—Obtainable only, MISS PALING, Golden Square, Henfield Sussex. Vacancy for Pupil. r.d.85

DUTCH, ITALIANS, HYBRIDS. — 6-frame Stocks, 45s.; 4-frame Nuclei, 35s.; Swarms, 25s.; May delivery; carriage paid.—LEE, The Beeman, Burgess Hill, Sussex. r.d.69

HARDY PROLIFIC ITALIANS (Penna strain), every colony wintered, 3-frame Nuclei with 1922 Queen, 35s. each, carriage paid; 5s. extra for box, returnable; additional frames 8s. 6d. each.—ERNEST BLISS, "Ranmoor," Dunstable, Beds. d.91

BEES FROM HOLLAND.—The best Dutch Stocks offered in original skeps (in crates of six skeps); moderate prices. Price List on application.—HENK v. LANGEVELD, Gasthuisringel 42 Rood, Haarlem. r.d.56

PENNA QUEENS.—Please note precise address: ENRICO PENNA, Casella Postale 178, Bologna, Italy. r.c.141

JACK TICKELL.—For Queens, Stocks and Nuclei. List free. — Westbourne Apiary, Cheltenham. r.a.54

LANGSTROTH HIVES. — Perfectly simple, simply perfect, international standard; as efficient in this country as elsewhere; make the bees pay; our speciality. All Accessories. Swarms of Bees. Finest Queens.—DICKINSON & OWEN, LTD., 25, Bartlett's Buildings, Holborn Circus, London, E.C.4. 'Phone, Holborn 824. Equipment in British sizes to special order. Illustrated Catalogue now ready, post free. r.d.35

MIDDLESEX BEE-KEEPERS' ASSOCIATION. —A Course of six Lessons in Practical Bee-keeping will be given at the Model Apiary, S. Mimms. Inclusive fees: Members of the Middlesex Association, 7s. 6d.; non-members, 10s. 6d.—Syllabus and dates can be obtained from the HON. SEC., Middlesex Bee-keepers' Association, 23, Bedford Street, W.C.2. r.c.107

QUEENS by return from April till October.—PEARSON & GALE, Marlborough. w.14

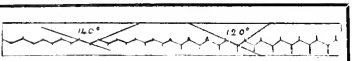
"WIGHT" AND "ACARINE" DISEASES.—Prevention and removal; invaluable advice; 5s. 6d. "An eye-opener."—ALF. RYALL, 8, Ospringe Road, N.W.5. r.c.87

STRICTLY BUSINESS.—One dozen Flavine—S Powders, 1s.; a Japanned Sprayer, post free, 6s.; a Floorboard Feeder, to fit under any hive, 10s.; post paid.—S. H. SMITH, 30, Maid's Causeway, Cambridge. d.36

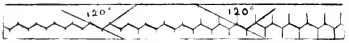
THE ACARINE 1921 ECLIPSE PAD.—It knocks out mites and moths. Your money back if not satisfactory. Price 5s., post paid.—S. H. SMITH, 30, Maid's Causeway, Cambridge. d.37

BOOK NOW!—Choicest home-bred Carniolan Queens for 1922.—PEARSON & GALE, Marlborough. b.24

ADMINSON'S SEMI-COMBS.—Nuclei on these combs from mid-May at cheapest rates.—PEARSON & GALE, Marlborough. r.b.66



From a plaster cast of an ordinary comb foundation showing the flat angle of 140 degs. At the right the bees have built it out, thinning the base and changing the cross-section angle to 120 degs.



From a plaster cast of AIRCO foundation partly built out at the right hand side.

AIRCO FOUNDATION

A beeswax foundation made by the Root Co. by a new (patent) process which reproduces the midrib more accurately. Practical tests show that bees will work it out quicker than ordinary foundation. We should like every beekeeper to give it a trial. Send in your order to-day.

Medium brood, 7 or 8 sheets, **3/6** per lb.
Narrow brood, „ „ **3/8** „
Extra thin super, „ „ **4/-** „

BURTT & SON,

Manufacturers of Beekeepers' Supplies

Stroud Road, Gloucester.

Descriptive AIRCO Booklet Free on Application.

HAVE YOU READ "THE BEE WORLD"? If not, why not? Every number in itself is a useful literary work for practice and reference. Specimen copy free.—Offices: THE APIS CLUB, Port Hill House, Benson, Oxon.

DUTCH BEES.—Send for my artistically Illustrated Catalogue outlining my method of managing bees profitably. Read my notes on Queens and Queen Rearing. Will interest the expert and amateur. Free for the asking.—WHYTE, Bee Farm, Cumbernauld Station, Dumbartonshire. r.b.32

GORDON ROWE, 28a, Moy Road, Cardiff. 'Phone: 2422. Tel.: "Sunflower, Cardiff."

PARCHMENT CONTAINERS, stamped "Fine Lemon Curd," offered at half price to honey producers who can affix labels over the printing, 1 lb., 4s. 9d.; ½ lb., 4s.; ¼ lb., 3s. 6d.; ⅛ lb., 2s. 3d. per 100. Also plain 2 lbs., 14s.; plain 1 lb., 9s. 6d. per 100. Add for carriage 1s. 6d. to each 5s. value ordered. Pure Honey for bee feeding, etc., 60-lb. tins, 50s. cwt., f.o.r. Terms cash. Samples 6d.

THE
British Bee-Keepers' Association.

Insure *now* against loss by damage done through bee stings. All particulars from

W. HERROD-HEMPSALL, 23, Bedford Street, Strand, London, W.C.2.

SUPERIOR B— GOODS

PREPARE FOR THE HONEY FLOW! Place your orders with **Lt. A. H. BOWEN,** Coronation Rd, Cheltenham. Art Booklet FREE

PERSONAL SERVICE

The Bee-Keepers' Calendar.

MAY, 1922

18 Thursday. "When you see the brown bees.
Hangin' round the yaller skip,
Thick when the summer nights are warm,
And you hear the old queen
Pipin' in the starlight,
Then you'll know there's going to be a swarm."
E. S. Fleming, "*Swarm Wisdom.*"
("*B.B.J.*," *July* 25, 1918.)

19 Friday. "Appeared the loyal Fays—some by degrees
Crept from the primrose buds that opened then,
And some from bell-shaped blossoms like the bees."
T. Hood, "*Midsummer Fairies.*"

20 Saturday. "And every moth and bee
Approach me reverently,
Wheeling o'er me, wheeling o'er me,
Coronals of motioned glory."
E. B. Browning, "*A Lay of the Early Rose.*"

21 Sunday. "Sit ye, my ladies, sink,
Sink ye to earth down;
Never be so wild
As to the wood to fly,
Be ye as mindful of my good
As every man is of meat and estate."
"*Charm for catching a Swarm of Bees.*"
("*B.B.J.*," *November* 30, 1916.)

22 Monday. In case of swarms remove the old stock to a fresh stand, and hive the swarm in its place, giving the supers to the swarm.

23 Tuesday. "If Swinburne, the melody maker,
Or Keats with his passion for beauty,
Or Wordsworth, the chanter to duty,
Or Herrick or Shelley were here,
Where the air is alive with strange humming
And filled with a going and coming,
The Queen of my bees, the Forsaker,
Forever would sing in your ear!"
Grace Allen, "*The Swarm*" (*from Gleanings*).

24 Wednesday. "Out in the yellow meadows, where the bee
Hums by us with his honey of the spring,
And showers of sweet notes from the larks on wing
Are dropping like a noon-dew, wander we."
Meredith, "*Modern Love.*"

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Seasonable Hints.

The warmer weather we have had the last week or more has given a much needed fillip to the bees. On the whole, stocks were rather weak last month, many of them having dwindled rapidly since winter. As evidence of the lateness of the season, we usually hear of the first swarms about April 24, but this year so far the earliest we have heard of was on May 8, when several were reported. Strong stocks that are not desired to swarm should be supered, and possibly some surplus from the fruit bloom, that is now abundant, may be secured.

In strong colonies a large amount of the newly gathered honey will be used for feeding the brood, and in many cases the bees will be living from hand-to-mouth. Most bee-keepers would be astonished at the amount consumed for this purpose if they were to make an examination of a strong colony in the evening and note the amount of honey stored in the combs, and make another examination next morning and note the difference. Cold, wet days are not unknown during May, and should there be two or three such days following each other, a strong colony may be reduced to the verge of starvation. This must be borne in mind, and syrup given to tide them over the bad time. It may be looked upon as a loan, which will be amply repaid later on. We recollect some years ago many a bee-keeper having to feed the bees until the longest day, and later securing a good surplus of honey, which, but for the help given, would have been lost. Frames fitted with foundation and section racks and shallow frame boxes ready for placing on the hives should be ready for instant use, nor should a constant supply of water be neglected, a tremendous amount is needed during the warm spring days.

A Dorset Yarn.

"No man can do well which he understandeth not well; study, and take pains for knowledge."

Those who keep bees for profit, as we do at the Violet Farm, will realise that it is impossible to harvest honey without knowing something about the bees that collect the nectar from the flowers. They must get a complete knowledge of their habits, and this can easily be gathered from books in the first instance. By following carefully the details of manipulation year by year, the owners soon get to master the details of craft; by watching carefully the workers, it is easy to see how the colony is progressing from the outside of the hive. One can see some stocks that are very strong in numbers, where others have not half the strength or energy. The strongest are always the most active. Books will advise the craftsman to take out a comb of emerging brood from the strongest and give to the weak ones, placing another comb in its place. This will quickly build up the weak stock; the bar of empty cells will give the strong lot a still greater desire for work by repairing the broken edges of cells. We find it is not always wise to place it in the centre, or they may alter a lot of this comb for drone cells; place it between two outside combs. The first rack of sections are now heavily covered with bees. We find, if these are wholly filled with thin worker foundation, the bees will build drone cells, and the queen will lay in same if no excluder is used. Bees always work better without excluders. If you can get a surplus when this great wealth of fruit blossom is at its best, you are on the road to success. Bees are covering the lot of standard bars placed over the brood nest. Books will advise you this will largely stop the desire to swarm. We find in some instances they have never sent out a swarm when placed on top of the brood nest. Last season a hive had three supers of standard bars, and did not swarm. Where they were placed beneath the brood nest last year, the blacks swarmed before the end of May. This season, on May 2, they had nearly filled three of the standard combs placed over the brood nest; these are blacks and very strong. This must be largely from plums and gooseberries, as there are such quantities of them close to the hives.

I want to get some good standard combs for exhibition, and have invested in some dividers made of queen excluder zinc. Last season the standard combs were sealed so unevenly when placed over the brood nest with no dividers, the bees drew out the cells so far beyond the frame. To get them for early shows they must be started early. There are no eggs in any of them yet, but honey from top to bottom. Last year they left room for brood in the lower centre portions. I do not want to put on the queen excluder over the brood nest if they will go on without, as bees have an easier access to the combs above. These will have the dividers between each standard comb, and as soon as most of it is filled we shall lift

it with another lot of empty standard bars: it will not matter if the queen goes into this one; it is m stly only one lot of eggs that is laid in the lower centre. As soon as these emerge it is all filled with honey; the old brood nest will be empty for still more brood. This is what experience teaches me.

In transferring combs of emerging brood we find it is better to have two cloths, each with some carbolic or Izal on them; when the cover-board or quilt is lifted off cover the whole with one cloth, start from one side and examine each comb, rolling back the cloth enough to free the bar. A friend of mine pulls the cloth from the off side just enough to free each bar as it is inspected; as one cloth is pulled to one side the other is drawn over those that have been investigated. The comb for removal should have a fine lot of brown capped brood, with a good many showing their heads eating off the cappings. One of the cloths should be drawn back over this bar; as it is lifted out the other one should be drawn over the other frames, as the carbolic cloth falls on each side of the lifted bar, the bees will hasten down towards the bottom bar, a quick jerk will shake them all off. Take off the cloth and carry the comb to the hive that wants strengthening. The carbolic cloth will subdue the bees while you take out an empty comb, move others back and place brood where there are plenty of bees; cover over securely and place empty comb in the hive from which the full one was taken after closing up the centre combs. Take away carbolic cloth and cover down. We have tried all ways recommended by books to get surplus honey. Unless weak stocks are rapidly built up in May there will be very little surplus honey, as the queen do not lay eggs quickly when there are few bees to look after them.

Flowers on the farm now are very plentiful. All the pears are out in full blossom, and all the late flowering plums are at their best. One or two early flowering ones, like Early Rivers and Prince of Wales, are over. Cherries are full, their fragrance very strong. I wish we had planted more of them, as their sweetness and beauty are delightful, as well as rich good food for our bees. The variations of the varieties are very marked as each blooms; all seem somewhat different, though all are white.—J. J. KETPLE.

Echoes from The Hives.

The season opened with a rush to-day with the hot weather and the fruit trees in full blossom. I had two swarms to-day, May 8, one from frame hive and one from skep.

W. J. WOOLLEY.

Evesham.

Honey Imports.

The registered value of honey imported into the United Kingdom in the month of April, 1922, was £8,268.—From a return furnished by the Statistical Office, H.M. Customs.

Jottings from Huntingdonshire

Three glorious days of warmth with a sou'-west wind, and then a sudden drop in the temperature and the wind in the north, has resulted in "as you were" within the hives—breeding excepted. The sum total of honey stored is little, if any, more than a week ago in every hive but those inhabited by the Dutch bees. These hardy creatures go plodding on: it takes a lot of cold to keep them within and much heat to excite them without. The middle of May and only one swarm! But no need to despair, there's time for many things before we shut down for another winter. All the supers are occupied, but that's not enough. Honey ripe and well capped is the sight which rejoices the bee-men, and I happen to be one of those individuals who like to take off filled supers before Whitsuntide.

The world is all glorious without, blackthorn and whitethorn bloom have met together, and pear and apple blossom kiss each other. The buttercups now wave their heads above the meadows, and the lady-smocks flourish down where the waters flow. The blossom of the silverbeech calls the bees, and not in vain. The tuneful hum descending from the branches, like some open diapason within the swell box of a powerful organ, is good to hear. The drones, too, are flying freely, and there is music in the air. Ask me where the bee sucks; I reply everywhere. I walk along the hedgerows—they are there; I stroll beneath an avenue of chestnuts—they are there; and look over a gate at the flowering beans—they are there also. The flowers of mead and ditch are not ignored, while, of course, the fruit blossoms are being fertilised apace. Wonderful insects, bees! There comes a time when every bee will choose the blossom of plum, another the dandelions, another the charlock as their chief source of nectar, and now no wealth of white or pink or yellow attracts them to the ignoring of aught else. When Thomas Arne composed "Where the bee sucks," I think he must have been inspired in May. This reminds me. A few weeks back, "Where the bee sucks" was sung at St. Paul's, Covent Garden. Why there? Was it because of its nearness to the JOURNAL office? Did our Editor and his staff cross the road to hear, or were they just content with catching a few strains as they floated through the office window? Perhaps the great bee-men of 23, Bedford Street, knew nothing about it. This would not be surprising, since Londoners do not, as a rule, know what happens over the way. The most unobservant person in the world is a Londoner. Yet why? On my last visit to the Metropolis I had to pay a call in Hanover Square. After mounting three flights of steps I saw a man, and said, "Mr. E., I presume?" "I'm sorry," was the answer, "that is not my name. This is my office here," and he pointed to a door bear-

ing his name plate. "Can you, then," I asked, "direct me to Mr. E.'s rooms?" Mr. E.? I've never heard the name; don't know such a man," was his reply. "Upper story, then, I expect," I said, as I left him, and proceeded along the landing to take the next flight of steps, when lo and behold, on the second door I saw the name I wanted. Now, the distance from the door of the above man's office to Mr. E.'s was about five yards. Small wonder that when a Londoner comes to settle in the country he invariably fails, while often a countryman going to town succeeds. Well, bee-keeping is a farce unless one is observant, and it's wonderful what one can learn by observation alone when among the bees. Now, my good friend from town, go out in the eventide of a May day and jot down all you see and hear; the columns of an evening paper would not suffice to contain those jottings. May I just relate a few? The new green of the hedgerows, capped by milk-white blooms. Trees shimmering in the rays of the declining sun reveal more green tints than an artist can paint. Here a tree seems bedecked with plumes, there the daintiest of needlework pales before the lovesome pattern woven by twig and new-born leaf. One tree shoots up straight as if its dignity was injured by the baseness of the world, another spreadeth forth its branches, calling birds and cattle and men to accept its welcome shade. Here flitting about are finches and tits, buntings and whitethroats, tree creepers and woodpeckers, robins and wrens. That short but tuneful song is the blackbird, that longer and more varied trilling is the thrush, and that full-throated tuning up from yonder tree is the nightingale. And there are a score of birds a-wing; swallows and martins, larks and warblers, while the stately rook goes cawing sleepily home to its nest. Then there are the scents—the rich odours of larch, cypress and poplar, the softer scents of may and bean blossom. That strong perfume is the wild plum mixed with that of the dandelion. One could go on for ever, but not every reader of the JOURNAL lives in a tenement overlooking a blackened railway embankment. So I will forbear. My closing remarks shall be words of advice. Don't take off coverings yet. The nights of May are often cold. Don't feed, where necessary, with unboiled syrup. Don't open the hive front too much, but at the same time don't cramp to one bee space. Don't start forming nuclei until you are sure there are many young bees about. Don't unite any stocks in May which are queenless if strong enough to re-queen. Don't have too much drone comb in the centre of the brood nest except in the hive you have selected for drone breeding. With regard to feeding, a correspondent has recently suggested golden syrup tins by punching one or two holes in the lid. Don't—punch the holes in the bottom; the lid can then be prized up, and the tin refilled as often as necessary without disturbing its position.

E. F. HEMMING.

Steeple Gidding.

Week-End Bee-Keeping.

BY S. H. SMITH.

(*Continued from page* 224.)

The poor bees struggle desperately, but lying helpless on their backs become exhausted and die. In June young wasps are about, and the bees fall victims to their sharp jaws. You will see bees walking about minus their abdomens. The wasps have sawn them off. Later in the season the wasps prefer the muscular tissue of the thorax, and leave on the ground the abdomen, head and wings.

If you saunter about your apiary after 9 a.m. you will notice little of these doings, "D. B." as the sun will have dried the alighting boards. You will have to be up between five and six o'clock, bee time, to note this destruction of bee life caused by the smooth surfaced alighting board.

The interstices between the sawdust grains prevent the wings of the bees from being glued down. I tried sand at first, but the laden bees do not like to land on the sharp edges of the sand. Yes; a second coat of paint goes over the sawdust.

The loss of bees in a large apiary must be considerable. On six consecutive mornings I counted the number of bees lying helpless on the alighting boards of a row of 15 stocks between 4.30 a.m. and 6.30 a.m. By that time the heat of the sun had dispersed all moisture. Though I moved rapidly up and down the row, helping the bees to regain their feet, I often reached a hive only just in time to save a bee from dissection by a wasp. The total number of helpless bees was 4.942, and very few, if any, would have escaped destruction.

I can see by the way you trim off thick edges that you are used to handling a paint brush, and I take it for granted that you will punch in the nails and putty the nail-holes. Any knots will, of course, need knotting, but our appliance makers are using such good timber now that a knot-hole is hard to find.

Goodness me! It is half-past three and you will have to be going, "D. B." How our tongues get going in this bee business! So ends our first lesson. I am glad you have taken up bee-keeping. In a season or so we shall no doubt be arguing about many points. But experience and knowledge must be there first to make it worth while. When a man knows not, and knows that he knows not, one may teach him. Otherwise not. So long, old man, I'll meet you at the hive shop at 5 p.m. sharp.

Rain clouds were coming up when I went to the village, but a bit of luck came my way. I ran into young Bob, the son of old Bob, the village wheelwright, who owns the acre field next to the orchard in which are my bees. It is surrounded by a high beech hedge, and for a long time I had wanted to

put bee stocks into this field, but as the owner kept it for grazing his two horses it had been impossible to make a deal. Young Bob now told me that his father had sold his horses and had bought a Ford van, so that negotiations might be attempted.

In two minutes we had come to terms about hauling the bee stocks, and he promised to have the Ford at the apiary at 7.30 p.m. I went up town and met "D. B." at 5 p.m

By suggesting that "D. B." should save us some hard cash by practising making up frames and sections we save a little on costs by buying these in the flat and foundation by the pound. What we saved and some more we put into a couple of embedders, a wax smelter, a wiring board, and a straw skep. Delivery was promised that evening.

As his wife and children wanted to go to the theatre, "D. B." asked to be excused from receiving the bee stocks personally. I assured him it would make no difference

By 8 p.m. the two bee stocks were safely installed in the garden, and the bees standing about the entrances prevented from flying by a pouring rain. Bob and I made four trips from the motor to the ash-strewn site through more shrubbery and mud than I had ever noticed before in that or any other garden. And every shrub encountered handed out a shower bath. The only witness of this heroic performance was Freda, the "D. B." maid. From under a white cap, half hidden behind a curtain, an eye peered out and took in all the flounderings and soakings with malicious approval.

After a week of fine weather the fruit blossoms made a wonderfully fine show. The next Saturday at 10 a.m. I found "D. B." pacing up and down the garden path under a canopy of pink and white apple, pear and cherry blossims.

The bees were pouring in and out of the hives. We took a look under the quilts and the bees were covering the combs nicely. I suggested that we might transfer them into the new hives, and we went to inspect them. They had been painted neatly with white enamel paint, but the plinths were a pale blue. "D. B." explained that his wife had read yesterday that bees loved blue, and they hoped that this addition would meet with my approval. I put out a finger and touched the blue paint. It was still wet.

"That puts us back a week, 'D. B.,' but it won't make any difference to the progress of the bees. It will take them another week to fill up those ten combs we put on last week. There is nothing to be done in this apiary, so you had better come down to mine after your dinner. Some queens have arrived, and I am going to divide six double brood-chamber stocks and give a queen to each queenless part. Besides you may as well learn how to handle a double brood-chamber stock before we tackle the two that are here. Make it as soon after 2 p.m. as you can. You will find me waiting for you."

(To be continued.)

Unedited Letters of Huber.

(Continued from page 144.)

[*Published by the kind permission of the translator, Mr. C. P. Dadant, editor "American Bee Journal."*]

GENTLENESS OF BEES.

To Miss Elisa De Portes.

Lausanne, May 15, 1828.

Your mother, my dear Elisa, does not disapprove that I should interest you with the subject of my favourite studies, those good bees which have diverted me from the inseparable sorrows of humanity and have done me so much essential good that they will surely do for you what they did for me, if you are in need of it, and surely will do you no harm. Be it so!

I should like to see bees about you and to think that they will sometimes remind you of the friend who has had so much to do with them. The first and only word that I wish to say to you about them to-day is not to consider them as formidable as is generally believed: it is a truth proven by me through a half century of observations and which the most simple reasoning might have taught us.

If the bees, the wasps, the humble-bees and all the beings that are provided with stings had received from Nature an offensive instinct or hostile dispositions, in view of their prodigious number, the wings with which they have been provided and the speed of their flight, the earth would be uninhabitable for us and for all animals.

If chance had presided at this part of creation, such a condition might have obtained, but it is to a Father, to a true Father, that we owe our existence. He has also thought of the happiness of his children, otherwise the bees, instead of being a blessing would be but a curse to us and the treasure that they could bestow upon us would have been a dead loss: their wax and their honey would have cost us too high a price.

If truly fearful weapons have been given to the bees and other insects of their kind, it is uniquely for their defence, to preserve that which is dearest to them—their queen, their young, their companions or their sisters, and their treasures, against the attacks of numerous enemies. When you have given this some thought, kind Elisa, and will believe a friend who has not the least desire to see you struggling against the poisoned dart of the bees, I will advise you, and your mother will permit you to observe my favourites in a glass hive. One finds beautiful lessons in the study of natural history, and especially in that of the beings which I have most studied.

Constant obedience to the laws which have been imposed upon them, and the happiness which results from it are a spectacle of the highest interest for us. If wisdom is without merit when it is compulsory, it is a great merit for the bees that we be compelled to seek the Law-maker and see Him in His works.

A thousand caresses for you and yours, my beloved Elisa.

(To be continued.)

Derbyshire Notes.

After reading this week's (May 5) contributions from friends Kettle and Hemming, I took up my pen in a fit of jealousy to compare the backward state of bees and Nature generally here with the rosy outlook they give for Huntingdonshire and Dorset. I wrote a few pages, making one long moan, and then put the article by for a day. This was on Friday. But one's outlook on life can be largely influenced by the weather, and Saturday dawned bright and beautiful, and opened out into the finest bee-day of the year up to that time. Sunday followed brighter still, and here I am to retract the nasty things I said or meant to say, and to prophesy that after all 1922 will be the best honey year we have ever had, that bumper year we are all looking for, but which really never comes in all its full perfection.

"Hope springs eternal in the human breast,
Man never is, but always to be blest."

Our greatest successes are always, I think, at this time of the year, in early May, when spring has again put on its bright verdure, when the orchards are white and pink with bloom, when the meadows are yellow with dandelion and the voice of the cuckoo is heard in the land. It is then that, lured by the bright promises of the first sunshiny days, the bee-man makes his plans for the future. No; let me withdraw that. Not his plans. If he is a true bee-keeper they have been long made, but it is then that he builds his castles in the air. I warrant that his actual yields of honey, measured in August or September, do not nearly approach the products of his spring imagination. I know it is so with me. And is it not as well that it is so? He who is spurred on by his vivid imagination, will go further and reach higher than he who is merely content to take life as it comes. With this goad to drive him on, the bee-keeper, if he adds sound practice to his fruitful imagery, will procure greater blessings than his more stolid neighbour. In fact, I don't know whether the prospective blessings of apiculture are not one of its chief joys. It is like fishing. When I was silly enough in my greener days to follow that aimless pastime (I have lapses even now), it was always the huge fish to be caught that was the attraction, and led me on to spend profitless hour after profitless hour.

So, even now, with the hopefulness of a bright spring day to guide me, I have once again been dreaming. Why should I not do so. From early morning the hives have presented a busy picture of teeming life. First of all the water-carriers and scouts for the day, then the pollen bearers, and then clouds of young workers apparently taking their first geography lessons. Later, the pollen bearers seemed to form a less and less percentage of the busy labourers, and I was inclined to think that somewhere or other bees were already beginning to find nectar yielding plants.

I took a peep into a few stocks, and although backward for the time of the year, I found them quite up to time; so far as the season is concerned we are at least one month behind last year's calendar here this year.

With a certain amount of daring I decided on outdoor feeding. A bowl of syrup covered thickly with short straws and bits of stick was put out, and emptied in the course of a few hours. It is the first time I have ever done it, but for spring feeding on a fine day it appears to act well and does not induce robbing. It is certainly easier than the bottle-feeder for every hive. But I would not try it later in the year, for it appears to me that I should be merely asking for trouble. I should certainly deserve what I got, but it would be hard on the poor bees.

If this real bee-weather continues I can see supers on in the course of a week or so, and a little surplus of early fruit honey, perhaps the finest that I get round here.—D. WILSON.

North Cheshire Chat.

The calendar was wrong. Spring commenced on May 6, not on March 20. How we welcome thee, O Spring! What a change in a few days. Last week winter storms; this week glorious warmth and sunshine. Scarce a bud open a week since. Now the hedges garlanded with green, the sycamores hastening to expand their foliage and reveal hundreds of thousands, if not millions, of pendulous racemes of opening blossom; the pears, damsons, cherries, and plums a snowy mass of bloom, and the apple-trees and hawthorn yet to come. What a wealth of forage for the bees, and how they revel in it! The sweets on offer are so varied that they seem to be at a loss to know where to go first. A few are round the gooseberry bushes, and as one watches, anon they seem forsaken, and the contented hum comes from the damson-tree near by, while some are finding pabulum and sweets amongst the wallflowers, and others make a beeline for the wild cherries near the pits, while others prefer the pear-tree over the road; others, again, come in laden with the beautiful orange pollen from the dandelions. All is busy bustling on the alighting board. No time even to pass the time of day. Spring has come, and the golden hours must be utilised to the full to prepare the huge population needed for the great honey flow in the glorious summer. And what a roar comes from the hive mouths in the evening! Is there any sound more musical to a bee-keeper at this time of the year than this "roar" at the hive's mouth? Or what smell more sweet than the smell of freshly-gathered honey and healthy brood that comes from those hives with the "roar"? Meantime, we must give the little workers room, and build them up to 20 standard bars by the second week in June, and then when the clover honey flow commences we shall have our workers to gather it. Extra strong stocks may get some from the hawthorn and apple blossom which hereabouts has all got to come, not to mention the sycamores, which will yield for at least a fortnight. I would counsel beginners to give a pint of syrup to *all* stocks on the evening of every wet or cold day that happens along this month,

and never May yet came without a few days with icy winds which keep the bees at home, and until the apple blossom and hawthorn are well out they are *living only from hand to mouth*. I have not yet seen drones flying, but an examination a few days ago revealed the presence of a few, and a small patch of drone brood in a Dutch stock.

I have not time now to refer further to the price of honey, etc., as promised in this week's notes appearing in "B.B.J.," but hope to enlarge (with the Editor's permission) thereon next time.

D. J. Hemming.

Appleton, Warrington, May 12.

Staffordshire Valleys.

What a wealth of bloom is awakening here. They must burst out; they cannot be kept back any longer. The sun has become warm, and the waiting buds welcome it as a child welcomes its mother, stretching out to meet it and welcoming it by their fragrance. How long we seem to wait up towards the North. But now we sit in a Staffordshire valley that flows with milk and honey the wealth of flowers in field and garden awaken once again the thoughts of busy days. Here the Adminson Carniolan on 20 combs crowded with bees and brood send forth their army in ever-increasing numbers to the fields and trees, to bring in the various shades of pollen and gather the nectar that is awaiting this grand array of workers. I believe I can say it is the best stock in this county. The Italians are coming on, too. How they breed, and how they use up their stores! But I always see to it that they don't go short, for that would delay the progress of these wonderful breeding bees. How many novices retard these Italians by not continually feeding, and then, through neglect, they are swarming in the midst of the honey flow. We now hope that the brighter days are here to remain, and the fruit blooms will have the visitors to pollenate them, and the orchard will become a place of beauty by the increase in the number and size of the fruit, and the bee-keeper will be rewarded by the nectar that was gathered. So the world goes on, each being dependent upon the other. We are never so early with our sections and shallow frames as the south, but we do come in, and our stocks bring in the golden store, and we get level by the time the honey flow ceases. I think we should all be wiser if we could spend one year south and the next one north.

North Stafford.

Sheffield and District Bee-Keepers' Association.

A good and appreciative audience gathered at the Association's headquarters, Tontine Café, Sheffield, on Thursday evening, May 4, to hear a lecture given by the secretary, Mr. W. Garwell (Expert, B.B.K.A), on "How to Prepare and Exhibit Bee Produce Successfully."

The lecturer has a long and varied experience as a successful exhibitor at the great and smaller shows of the country, and out of the wealth of this he gave an illuminating discourse on what were the essential requirements for the successful staging of the various bee products. He also generously set forth the methods he himself employed in order to obtain the ideal exhibit, and his remarks were illustrated by a happy combination of excellent lantern slides and object lessons in the form of ideal and deliberately spoiled samples, the causes of the faulty preparation being simply and lucidly explained.

An interesting and instructive feature was provided in the exhibition of one pound of the lecturer's own honey which had been subjected to an analysis, and the component elements placed in separate containers. His description of the composition of the normal 1 lb. of honey was much appreciated by his audience. Other objects of exceptional interest were presented in a jar of chemical "manufactured" honey, one of nectar, and an excellent collection of various kinds of wax.

Mr. Garwell concluded his remarks with an appeal to the individual member for a more active interest in the exhibiton of bee products as a means of self education and the placing before the public of British honey in its most attractive form.

Many questions were asked by members as to the cause of their various failures in preparation, and were courteously answered, the company much appreciating the lecturer's lucid explanation.

A hearty vote of thanks was carried on the proposition of Mr. Haynes, seconded by Mr. T. Packington, and the Chairman (J. H. Richardson, Esq.), in expressing the appreciation of the company, said that personally he felt that this and other lectures provided by the Association were each one value for the yearly subscription.

P. R.

Bee Shows to Come.

A nominal charge of 2s. 6d. is made for notices (not exceeding 7 lines) in this column, 10 lines charged 3s. 6d. up to 15 lines 5s., which covers cost of insertion from order till date of show. Cash should accompany orders for insertion.

May 24-27 at Guildford.—Surrey B.K.A. Show. Two Challenge Trophies, Apis Club Silver Medal, B.B.K.A. Silver and Bronze Medals and Certificate, Surrey B.K.A. Silver and Bronze Medals, Open Classes Honey, Wax, Appliances, etc., Demonstrations, Lectures, etc.—Hon. Secretary, W. E. Hamlin, 43, Norbury Court Road, Norbury, S.W.16.

May 31.—Hunts Agricultural Show, Huntingdon. Bee Section under the auspices of Hunts Bee-keepers' Association. Open Classes for Combs and Extracted Honey and Wax.—Hon. Sec., F. Tunnington, Thrapston Road, Brampton, Huntingdon. **Entries close May 24.**

June 7 and 8, at Chelmsford.—Essex B.K.A., in conjunction with the Essex Agricultural Society's Diamond Jubilee Show. Apis Club's Silver Medal, Essex Agricultural Society's Silver and Bronze Medals, and also the B.B.K.A. Medals and Certificate, besides many prizes. All Classes Open. Lectures and Demonstrations on both days

in the Bee Tent by the County Bee Instructor.—Schedules and Entry Forms from Secretary, Essex Bee-keepers' Association, Rawreth, Wickford, Essex. (Stamped, addressed envelope, please.)

Royal Show, Cambridge, July 4 to 8.—Over £40 in prizes. All classes open.—Schedules and all information from Mr. E. C. R. Holloway, Burwell, near Cambridge. **Entries close May 20.**

July 20 and 21.—Lincolnshire Bee-keepers' Association Show of Honey, Wax, Hives, Appliances, etc., at Skegness. Over £30 in prizes. Open and County Classes.—Schedules and Entry Forms from Major J. H. Hadfield, Alford, Lincs. **Entries close on June 19.**

July 22, at Mill Hill, N.W.—In connection with the Flower, Fruit and Vegetable Show, under the auspices of Hale and District Allotment Association. Classes for honey and wax exhibits for competition.—Schedules are ready, and may be obtained by sending stamped, addressed envelope to the Hon. Secretary, Mr. A. Bacon, Yew bank, Tennyson Road, Mill Hill, N.W.7. **Entries close July 15.**

July 26-27, at Cardiff, Sophia Gardens.—Glamorgan Bee-keepers' Association, in connection with Cardiff and County Horticultural Society's Show. Open Classes. Special prizes: Taylor's W.B.C. Hive and Apis Club Bronze Medal.—Schedules from Secretary, Chas. F. Davies, 5, Borstal Avenue, Cardiff.

September 16 to 22.—British Bee-keepers' Association Annual Show at Grocers' Exhibition, Royal Agricultural Hall, Islington, London.—Schedules from Hon. Secretary, B.B.K.A., 23, Bedford Street, Strand, London, W.C.2. **Entries close certain September 4.**

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ADVERTISER, 34, a practical bee-keeper, desires Sleeping Partner at 8 to 10 per cent. interest, able to invest £200 in the establishing of an apiary of about 60 colonies in an exceptional honey district, the hives and stocks constituting the security. Full details of main and auxiliary sources of income from various aspects of the proposition.—Apply, Box 79, B.B.J. Office, 23, Bedford Street, Strand, W.C.2.

HONEY BOTTLES, tall, lowest prices, carriage paid; Labels, your name on, from 6d. per 100. Order now.—H. BUNNEY, Dudley. e.114

SWARMS.—Any weight supplied at lowest rates with young fertile Queen. — HARVEY, Apiarist, Andover. r.d.90

TWO STOCKS of Italian Hybrids for Sale, healthy, 1921 Queens, 8 frames, £3 each; box to be returned.—HANSON, 24, Triangle, Ilkeston. e.92

EXTRACTORS, Geared, several for Sale, new.—Apply for particulars, HANDLEY, 54, All Saints' Road, King's Heath. e.93

HONEY EXTRACTOR wanted, good make, geared top.—E. B. SMITH, Allerford, Somerset. e.94

BOOKING SWARMS from healthy English Bees.—H. SAUNDRY, Sennen, S.O., Cornwall. e.95

TWO large substantial Hives for Sale, new last season.—Apply, DR. SMITH, 5, West Castle Road, Edinburgh. e.96

FOR SALE, 8- and 10-frame Stock Italian Bees, 1921 Queens, no disease in apiary, immediate delivery, 68s. and 84s.; 10s. deposit on returnable box.—Box 69, B.B.J. Office, 23, Bedford Street, Strand, W.C.2. e.98

I AM changing my bees into American style hives, and have a large quantity of all kinds of English Standard Hives and Appliances, including drawn combs in standard and shallow frames, for Sale at cheap rates to clear; no disease. Send a card to-day for full particulars of any appliances you are wanting. Hives include Simmins' Conqueror, Manley 16 x 10, W.B.C., Taylor's Combination, etc.—E. W. D. MADOC, Mattishall, East Dereham. e.99

WANTED, Geared Extractor; no rust; small preferred.—54, Mount Street, Bala, Mereneth, Wales e.100

ITALIAN HYBRIDS.—A few sulplus Stocks on 8 frames, 65s.; box returnable.—CHARLTON, Fulbeck, Lincoln. e.101

FOR SALE, several strong pure Italian Stocks on 10 frames each, all wired, 1921 Queens, 70s. each; box 10s., returnable.—W. EMERTON, Apiary House, Chalton, near Dunstable, Beds. e.102

BEES.—A few 6-frame Stocks of Hybrids for Sale, 50s.—NEALE, Highfield, Littlehampton, Sussex. e.103

WANTED, Extractor, Ripener, Wax Extractor, Honey Tins.—ALEX. FISKEN, Westerton, Dumbartonshire. e.119

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HAVE a few more strong Stocks Hybrids on six standard frames, wired combs, 1921 Queens, good working strain, for immediate delivery, 50s., carriage paid.—WM. CHANNELL, Grove Apiary, Histon, Cambs. e.53

I HAVE still a few 8-frame Stocks Italian Bees for Sale at £3 15s. per stock, f.o.r.—DOBSON, Hunton Bridge, Herts. r.e.57

NATURAL healthy Dutch-Italian Swarms, 30s.; second, 25s.; cash with order; box returnable.—J. BOYES, Bee-keeper, Snainton, Yorks. r.e.59

FINE Cambs. Swarms, 30s.—S. H. SMITH, 30, Maid's Causeway, Cambridge. e.71

NATURAL SWARMS from bar-frame hive, 30s each. Orders booked.—NORTH, Notley, Witham, Essex. r.e.80

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SWARMS, May delivery, 7s. 6d. per lb.; established on 5 frames, 45s.—BARRETT, Sunnyside, Cecil Park, Pinner. r.e.6

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We are now receiving 30-40 queens daily from our breeders, and we can fill all orders (up to this number) by return of post.

Tested, 12/- Untested, 10/-

PEARSON & GALE, MARLBOROUGH.

STRONG STOCKS HYBRIDS, 75s.; Hive, 20s.; box 10s., returnable.—REV. COOPER, 62, Park Hill, Carshalton. r.e.15

STRONG HEALTHY SWARMS for Sale from mid-May, 27s. 6d., carriage paid. Cash with order. Boxes and frames returnable.—PULLEN, Ramsbury, Hungerford. r.e.37

10-FRAME STOCKS, Italian Hybrids, in nearly new Hives, Lee's Improved, complete with crates, sections, or drawn-out shallows and excluder, £5 2s. 6d., carriage paid; guaranteed healthy.—TUNMER, Chalfonts, Leiston. r.39

SWARMS, May 10s. lb., June 8s. lb., Dutch, guaranteed healthy (always buy by weight). Orders in rotation. Note extract from letter received: "Up to the time of the introduction of these Dutch bees our average yield per hive was not more than half of the record yield given by these Dutch bees."—WOOD, Colewood Apiary, New Road, Mitcham, Surrey. r.e.41

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SELL.—Rotax all-brass Motor Car Head Lamps, self-contained acetylene, very powerful, 30s. the pair; two small powerful Acetylene Brass Head Lamps, with separate generator, suitable light car or cycle car, £3 the set; Austin Rear Wind Screen, mahogany framework, £7; Mills' Automatic Acetylene Generating Plant, suitable for 10-roomed house, £6; quantity of Acetylene Gas Brackets and Chandeliers, prices with particulars; small folding Magic Lantern, 30s.; single barrel .410 Gun, 30s.; motor cycle all-rubber Ponco, reaches to ankles, wind- and weather-proof neck and sleeves, 50s.; all carriage forward.—HERROD-HEMPSALL, Old Bedford Road, Luton, Beds. c.77

SELL a Lee's 12-frame W.B.C., second-hand, one lift and one shallow frame, supers, 30s.; disease free; carriage forward.—Box 65, B.B.J. Office, 23, Bedford Street, Strand, W.C.2. d.97

HYBRID Italian Swarms, healthy, May and June, 25s., cash with order.—J. M. WILKIN, Pymoor, Ely, Cambs. e.90

IN CONSEQUENCE of the Herefordshire County Council giving up their Restocking Scheme, the Apiary is for disposal. Italian Hybrids, all good, healthy 10-frame Stocks, all 1921 Queens, either with or without hives, without hives sent in special travelling box carriage paid to nearest station, 70s.; box charged 10s. extra, which will be returnable and cash allowed when received. Also 200 drawn-out Shallow Combs, 1¼ top bars, perfectly healthy, 18s. 6d. per dozen, carriage paid. Orders booked in rotation. Cash with order.—J. ARNFIELD, Arncroft, Breinton, Hereford. r.e.17

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THE WISE BEE-KEEPER looks for quality. The South Hampshire Apiaries breed only from the very best strains. Result: Quality and satisfaction. Beginners' Outfits from £5.—All communications, H. E. NEWTON, New Milton, Hants.

FAMOUS COTSWOLD QUEENS, raised by a specialist from recorded stock. Book for June delivery. Booklet free.—BOWEN. e.104

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FOUR 4-FRAME ITALIAN NUCLEI for Sale, Penna and Bozalla Queens; could be delivered in 24 hours in Bournemouth district on boat days; absolutely free from disease; price £2 10s., including not returnable travelling box.—Apply, LOW, Sanchet House, Alderney, C.I.

VIRGIN ITALIAN QUEENS, 5s.—TICKELL.

NUCLEI, 3 or 4 frames, May, 40s., 50s.; June, 30s., 40s.—TICKELL.

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BROOKS' IMPROVED SECTION FRAME (Prov. Prot. 4,657/22), rack contains 7 frames, special dividers, follower and springs, 8s. 6d.; complete with 21 sections and full sheets foundation, 11s. 6d., post free. "It will revolutionise comb honey production." Leaflet free.—JACK TICKELL, Westbourne Apiary, Cheltenham. e.110

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SECTIONS.—Parchment Board, 8s. 6d. for 100; 4th plated Wire on reels, 11d. each; Queen Excluders, wire, 1s. 6d. each; Swarm Catchers, 3s. 6d.; all post extra.—BUCKINGHAM BROS., 82, Warwick Road, Luton. e.52

For best bees, queens and appliances come to PEARSON & GALE, Marlborough.

PENNA QUEENS.

Address:—E. PENNA, Casella Postale 178, Bologna, Italy.

PRICE LIST FOR 1922.

	May.	June.	July.	August.	September.
One Young Pure Fertile Italian Queen	10/-	9/-	8/-	8/-	8/-

SPECIAL OFFERS, until countermanded, for queens in lots of 4 at a time: From June 10th to June 30th, **£1 8s.**; from July 1st to July 31st, **£1 4s.** Orders booked in rotation, cash with order, carriage paid, safe arrival guaranteed. Payment by cheques or British postal orders. International money orders are **not** accepted. 10% discount to Apis Club members on my prices, **except** on "Special Offers."

WINTERED GOLDEN NUCLEI, full of brood, 4 frames, 42s.; 6 frames, 75s.; August-hatched Golden Queens, 10s. 6d., by return; Hybrid Stocks, 10 frames £4, 8 frames £3 5s. Swarms booked. LILLEY, Lamarsh, Bures, Suffolk. e.108

TORTORA'S choice fertile Italian Queens are the best. May, 9s. 6d.; June, 8s. 6d.; July onwards, 7s. 6d.; reduction for five; safe arrival.—Sole Agent, HULBERT, "Chalet," Warwick Road, Olton, Birmingham. r.e.112

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SUB-COMMITTEE FOR AGRICULTURAL EDUCATION.

The above Committee have for disposal a limited number of 4-frame Nucleus Stocks of Italian Bees (disease-resisting strain), 25s. to 30s. each.

Particulars from JOHN C. RUSHTON, Assistant Director for Agricultural Education, Staffordshire Farm Institute, Penkridge, Stafford. e.115

WE CAN STILL BOOK just a few more Stocks and Nuclei, highest grade pure Italians. A satisfactory deal guaranteed.—WELSH BEE GARDENS, Brecon. (Proprietor, Lieut.-Colonel Weaver Price.) r.d.44

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Italians—Nuclei, 3-frame, 1922 imported Queens, May, 40s.; June, 30s.; carriage paid. Returnable boxes, 10s.

RIVIS & GRAY,
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STRONG 4-frame Nuclei, pure-bred Italian, price £2, carriage forward; box returnable, charged 10s.—Old Henwick Farm, Newbury e.115

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DUTCH BEES.—3- and 4-frame Nuclei, 30s. and 40s., packed with brood, June delivery, carriage free; travelling box 10s., returnable if carriage paid; guaranteed healthy and strong; cash with order.—E. LANG, 124, Canterbury Street, Chorley, Lancashire. r.e.70

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BRITAIN'S BEST BEES, as supplied by me to the Board of Agriculture. 6-frame Stocks, 45s.—LEE, the Beeman, Burgess Hill, Sussex. r.e.87

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MAY SWARMS, 25s.; Queens, 7s. 6d.; Nuclei, 30s.—WOODSFORD, Expert, Chilworthy Apiary, Chard. r.e.28

A FEW 8-frame Italian Stocks, immediate delivery, almost ready to swarm, 60s.; guaranteed healthy; travelling boxes 10s. extra, returnable. Twice as cheap as nuclei.—J. YOUNGER, 16, Maid's Causeway, Cambridge. r.e.26

ITALIANS, Nuclei, genuine 1922 Penna Queens, 3-frame, 40s.; box 10s., returnable; Penna 1922 Queens, 11s. each, delivery end May.—ASTBURY, "West Farleigh," Wylde Green, Birmingham. r.e.69

MAY SWARMS in new cane bound skeps, 37s. 6d., carriage paid, with super. All kinds of Skeps for Sale.—H. SEAMARK, Skep Works, Willingham, Cambs. e.30

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CHOICEST BRITISH GOLDEN 10-frame Colonies, 80s.; 6-frame, 58s.; returnable crates.—ATKINSON, Fakenham. r.e.33

I DESPATCH pure Italian fertiles by return post.—ATKINSON, Fakenham. r.e.34

FINEST ITALIAN NUCLEI, with Cannell's imported 1922 American Beauty Queens; satisfaction absolutely guaranteed; May, 3-frame 45s., 4-frame 55s.; June, 40s. and 47s. 6d.; carriage paid; travelling boxes returnable.—HOGAN, Boxford, Suffolk. d.71

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A packet of Hubam Clover Seed given free with each stock. e.116

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ITALIAN, Carniolan and Hybrid Stocks and Nuclei for Sale, strong and healthy, delivery May, low prices.—DAVIDSON, Forest Road, Burton-on-Trent. c.197

NUCLEI.—A limited number of 3- and 4-frame Nuclei for disposal, Hybrid Italians, healthy; 3-frame, £2; 4-frame, £2 10s.; June delivery; travelling box 10s. 6d., returnable.—Box 63, B.B.J. Office, 23, Bedford Street, Strand, W.C.2. d.65

JACK TICKELL.—For Queens, Stocks and Nuclei. List free. — Westbourne Apiary, Cheltenham. r.a.54

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SCREW TOP HONEY BOTTLES

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THE ACARINE 1921 ECLIPSE PAD.—It knocks out mites and moths. Your money back if not satisfactory. Price 6s., post paid.—S. H. SMITH, 30, Maid's Causeway, Cambridge. d.37

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HAVE YOU READ "THE BEE WORLD"? If not, why not? Every number in itself is a useful literary work for practice and reference Specimen copy free.—Offices: THE APIS CLUB, Port Hill House, Benson, Oxon.

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British Bee-Keepers' Association.

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THE NEW 1922 "THAMES" STANDARD HIVE

with 15-frame brood box and 11-inch reversible lift, Cowan roof, W.B.C. floorboard and porch, is ideal for big stocks and big honey production. Your good queen is cramped in a 10-frame hive and swarming results. A few unpainted available for delivery by return.
Fitted to take W.B.C. parts, 28/- only.
Send card for our Catalogue.
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The Latest and Best British and American makes at the lowest possible prices.

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We are offering frames fitted with full sheets of AIRCO foundation, and strengthened by four strands of wire stretched tightly across and sunk into the foundation by electricity. Price complete with metal ends: Standard, per set of 10, 12 9, post free; Shallow, per dozen, 14 9, post free. Safe arrival guaranteed. *We can give prompt despatch.*

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Wire your orders to:
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The Bee-Keepers' Calendar.

MAY, 1922

25 Thursday. "Yet hark how thro' the peopled air
The busy murmur glows!
The insect youth are on the wing,
Eager to taste the honied spring,
And float amid the liquid noon:
Some lightly o'er the current skim,
Some show their gaily-gilded trim
Quick glancing to the sun."
Thomas Gray, "Ode to Spring."

26 Friday. "Sounding upon the air most soothing soft,
Like humming bees busy about the brooms."
T. Hood, "Midsummer Fairies."

27 Saturday. "Sweet is every sound,
. . . . . .
Murmuring of innumerable bees."
Tennyson, "The Princess."

28 Sunday. "Prayer and praise in a country home,
Honey and fruit: a man might come,
Fed on such meats, to walk abroad,
And in his orchard talk with God."
Katharine Tynan Hinkson, "Of an Orchard."

29 Monday. "Observe each wing!—a tiny van!
The structure of her laden thigh,
How fragile! yet of ancestry
Mysteriously remote and high."
Wordsworth, "Vernal Ode."

30 Tuesday. "The dear lumpish baby
Humming with the May-bee,
Hails us with his bright stare,
Stumbling through the grass."
Leigh Hunt, "Songs of the Flowers."

31 Wednesday. "And brushing ankle-deep in flowers,
We heard behind the woodbine veil
The milk that bubbled in the pail,
And buzzings of the honied hours."
Tennyson, "In Memoriam."

Review.

Beneficial Insects. Ministry of Agriculture and Fisheries, 10, Whitehall Place, London, S.W.1. Miscellaneous Publication, No. 37. 4d. net, post free. Not many years ago the attitude of the cultivator of the soil to all insects was one of hostility, and even now there are many who look upon any insect that is found in the ground or on plants, trees, or shrubs as enemies; but Nature will always maintain a balance, and though many insects found on a plant are preying upon and injuring it, there are others who, in their turn, and during some part of their life, feed upon these pests. This booklet is designed to give information as to which insects are beneficial. Insects are divided into three groups—Pests, Neutral and Beneficial. Two excellent coloured plates of beneficial insects are given. One, at least, of these insects is of interest to the bee-keeper, the ladybird, whose larvæ devour countless numbers of those pests to both cultivator and bee-keeper, the Aphides, one of which is the "greenfly," which is mainly responsible for "honey dew" honey.

A Dorset Yarn.

"Who can measure out the pace
Of the smiles on Nature's face?"

Apples are now so beautiful; they seem to crowd out many other flowers by reason of their lovely colouring, but bees are not on them alone, beautiful as they are; trees of beeches opening a few days before others are in for thousands of them. Sycamore has its attractions too, and the bursting holly seems to send them crazy with energy; it seems so difficult to "measure out the pace of the smiles of Nature's face" now the sun has warmth. Bees are on the dandelions in crowds, but it seems to be pollen mostly that is harvested from them. We have not yet any complete sections, but some stocks have had the second lot added to them: some have two chambers full of young brood and are working with feverish haste. We found two stocks without queens, not a particle of brood in them; another had a few bees and a laying worker. The two first had a comb of young brood and eggs from one of the best hives. Queen cells were drawn out full length in a few days. One swarm from a neighbour seemed restless the next day after they were hived. I gave them a comb of young brood from a double brood lot. They have drawn out and sealed two queen cells since Monday (May 22). It was a big swarm, and settled on a gorse bank. The queen could not have been with them or they would not have drawn out these queen cells so quickly. She may have flown away, as I let them run in the hive rather early on the Sunday evening. On Friday, the 19th, a very large swarm came and took possession of an empty hive. They came over the barns from a great height (all were blacks); had seen a lot of bees in and out of it after it had been scraped clean of propolis and comb, but whose bees it could have been to come to the Violet Farm on a windy day is beyond me. My nearest neighbour's bees are Italian hybrids, but these were black; no trace of yellow on them at all.

The strongest bees I have seen this year are Major Huth's, of Vines Close. They are in large hives, with 12 bars of extra size, the racks holding 32 sections. The inner side of the last combs had some brood in them. They were swarms last year from our Parson's lot. The house is near huge trees of sycamore and horse chestnut. They did well last season, and they look to do well this. Their food in summer must be largely from the trees, as there are only large woods and pleasure parks of the wealthy. Down here many horse chestnuts are in full bloom. Close by them are holly and so many flowers that bees work. The woods now have bluebells, but here are wild snowdrops and seedling daffodils from one of the finest raisers of seedlings in this country. Thousands of these have been planted in these grounds. They flower over a long period. Just now it is mostly the late white Pheasant Eye and some late trumpets. It is only those that live in these delightful places that can get any idea of the wealth of honey flowers, or "who can measure out the pace of the smiles on Nature's face."

Since writing this (early morning Sunday) cars and cycles have been to the farm. "Bees are swarming, come at once." Bees from a bar hive, a big skep level full at one place; no hive to put them in. Yet they read over and over again of the "virgins who had not their lamps filled." When I got back to my own bees (the Valley lot) there was one off across the fields, flying low. They went about half a mile and rested on a post that carried barbed wire. I opened out the cluster to see which side of the post had the queen, then brushed off that side into the skep; after seeing the queen inside, rested one side of the skep on the top of the post, and the others quickly ran in. It was only a small lot; should assume it to be a maiden queen out on her mating flight. Have not looked to see if any cells are uncapped; cannot see any difference in the numbers at the entrance or over the tops of sections. The young queen was the bronze-yellow of the yellow lots, but the bees with her were hybrids. One neighbour had a swarm on the branches of apples. He brushed in some and placed the skep over the others up in the tree and went off to the Sunday service. When he came out they had gone away to some other place that they liked better; his loss was someone else's gain. So many say, "bees like to swarm on Sunday." We try all we can to avoid swarms. Some that have two brood chambers have not yet gone in for the wild orgy of swarming. One

had raised ten queen cells; these were blacks. My friends have a weakness for yellows, so they were not wanted. The upper lot, with the queen, was sent away for a new colony: the lower lot was divided into two lots, empty extracted last-year's combs given them to fill out. These bees will not swarm; they keep the best queen, and will filt up surplus as soon as well established. Bees soon begin to build queen cells with the double chamber system if she is taken off with the top lot.

Bees seem to grasp the situation, as Nature smiles with flowers." They breed so much the faster, the queen seems to fill out the combs with eggs so quickly, the workers must lavishly feed her to keep up the number of eggs. A lot that had no excluder had nearly all the upper combs filled with honey; no sign of brood. The next week all the centre ones were filled with eggs and larvæ. The wealth of flowers had caused these cells to be emptied and turned into cradles for brood. It must be the "smiles of Nature's face" that makes the bees reverse so quickly the order of things. Surplus or brood, "to be or not to be?" as Shakespeare puts it.—J. J. KETTLE.

Week-End Bee-Keeping.

BY S. H. SMITH.

(*Continued from page* 237.)

"D. B." hesitated for a moment, then excused himself, disappeared into the house, and emerged carrying a note-book, which he put into his pocket. I was duly impressed. Carefully recorded data are always useful for reference, and I was glad "D. B." had the habit.

In half an hour we were among my bees. On the way out we stopped at my diggings to choose four Italian queen bees out of a parcel that had arrived by early post from Italy. We left them in the honey house, gathered together four hive stands, four roofs and extra quilts, and wheeled these out to where a dozen double-brood chamber hives were standing in a row.

These twelve stocks were established last autumn, "D. B.," and contain strong Italian stocks. I am going to divide them, give the 1922 Italian queens to the queenless parts, and when the queens are laying the new stocks will be sent to waiting customers. You are going to be initiated into the A B C way of working an apiary, which, being interpreted, means that the other fellow pays for your apiary. You might make a note of this point, "D. B." It is always useful ammunition to fire off at a household conference when bee-keeping and £ s. d. are matters of heated discussions.

Sooner or later you will be reading about the mites that infest bees. It is the old bees that are invaded by these little pests. By keeping our old bees and despatching only the young ones, we automatically establish controls.

Should the young bees start crawling, after being established in the new district, and our old bees show no signs, it is pretty certain that the trouble is a local one, and that mites infest that particular district.

Should, on the other hand, the retained old stocks in our apiary show signs of the trouble, we can at once notify the customer, and either have the stock returned or suggest treatment. But there is very little trouble from mites in Cambs.

We naturally select the four strongest stocks. By placing an extra stand alongside of each, and putting the top brood chamber on to it, we make four new stocks. By to-morrow most of the old flying bees will have returned to their old homes, and only young bees will be left in the new stocks. These young bees accept queens readily.

We may find exceptions, but here is how I figure it. By this time the queens will have brood in both brood chambers, and they may even be working again in the lower ones. When we put the upper box down on the new stand it will contain mostly young bees, emerging brood and some nectar and pollen. Should we need more bees to cover the brood, we shall shake the bees off another comb on to the alighting board. The young bees will go into the hive; the older ones will fly home.

The queen introduction part is now easy. You will read of 100 per cent. of failures and 100 per cent. of successes with single-brood chamber lots containing both old field bees and young nurse bees. But the principle we are working with ensures success.

There are many ways of introducing queen bees, "D. B." During a honey flow all may succeed. But it is often a ticklish job to introduce a queen of a different race to a single-brood chamber stock of some bees. In 1916 I lost a dozen fine Italian queens in trying to get Dutch bees to accept them. Not until I used only the young bees did I succeed. The plan used then is what we are going to use now.

The new stands are in place, and we need not bother to level them, as we shall shift them further away shortly. We now need veils, the smoker, the hive tool and a carbolic cloth.

Once again let us establish harmony in action by going through a preliminary exercise in motions. Here are two empty brood chambers. We place them one on top of the other to represent a double-brood chamber stock. There are only three movements necessary.

Movement No. 1.—Smoke the entrance.

Movement No. 2.—Insert the hive tool between the boxes to break the propolised joints. Be ready with the smoker as soon as a crack opens. Several things may happen now. Frames in the upper box may be glued by bracecombs to those in the lower box. On pushing up the upper box these lower frames would be lifted up, and a queen might be injured when they fall down. By giving a twist to the hive tool and bearing down on the lower frame you can easily break the obstruction. We have now disconnected the boxes, but they are still on top of each other.

Movement No. 3.—I give now a heave, and in one motion lift off the top box and

deposit it gently on to the new stand. As I do this I draw the carbolic cloth over the tops of the lower frames. Notice the laths tacked to each end of this carbolic cloth. When working alone, by holding it by one lath you may draw it over the lower frames as you remove the upper box. If you cannot lift the upper box, you will have to take out one comb at a time. You may remove the carbolic cloth in a few seconds, put on a clean calico quilt, place some carpet quilts, put on the roof, and you are through with the old stock for some time. The new stock, of course, is in possession of all the old quilts.

Here at hive No. 1 are clouds of bees on the move, and the sight and sound may be somewhat terrifying to a novice. But I'd rather tackle one of these big stocks bare-headed by myself than some single-brood chamber stocks I know of in this district with a couple of good bee-keepers to help me. That is when employing ordinary methods. There are, of course, ways of subduing the most vicious stocks of bees as well as men, if you are only resolute enough to apply them. If given a free hand, I'll show you one day how easily it may be done.

(To be continued.)

The Use of the Spine on the Second Leg of the Bee.

All bee-keepers are aware of the fact that there are various portions of the anatomy of the bee of the use of which we are either entirely ignorant or it is surmised.

The spine on the second leg has had several uses attributed to it. As a means of cleaning the wings, as a lever for removing the pollen pellets from the pollen baskets, etc. With regard to the former they may use it for this purpose, although I have never observed them doing so. As to the second I have many times watched the removal of pollen from the baskets. Never once have I seen the spine used as a lever. The invariable method is for the bee to insert her head and thorax into a cell while other bees come and remove the pellet with their jaws and front legs, it is then placed in a cell and rammed tight by the bee which removed it butting it repeatedly with its head. During the past summer I found at least one use to which this spine is put by the worker. That it has other uses is quite possible, as it is possessed by both queen and drone, neither of which carry out the work with which I deal herewith.

On a very warm day I noticed a number of worker-bees crowding round a lump of propolis about the size of a hen's egg, which had been removed from a Dutch skep by my assistant and thrown on the ground. I was interested, and got close down to see what they were doing. I found they were biting pieces off with their mandibles, and placing them in the pollen basket for conveyance to their homes.

I noticed a rapid sideway movement from

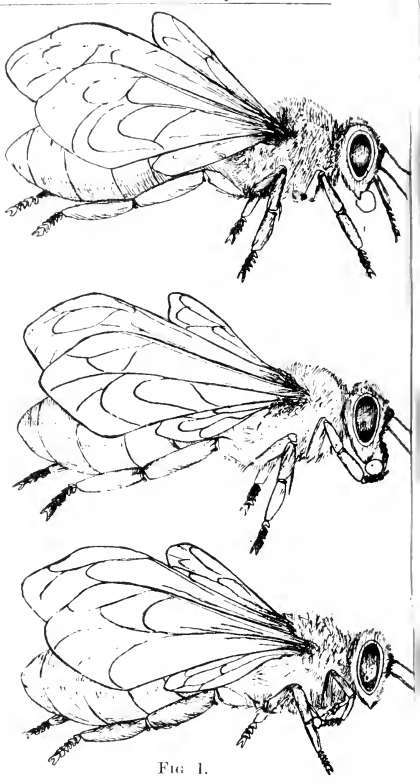

FIG. 1.

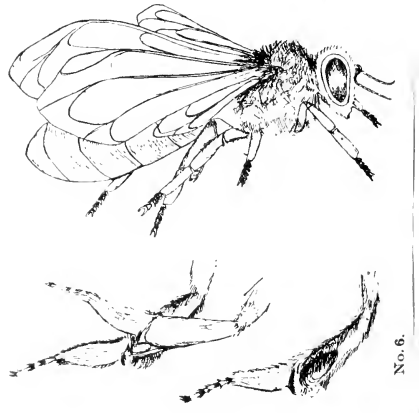

FIG. 2.

the jaws to the legs, and to observe this more closely I fetched a large powerful magnifying glass. By this means, although the movements were very rapid I was able to observe the method of transference very clearly. In all I spent six hours in observing in this particular case and saw many hundreds of bees without exception carry out the same movements. Since then on several other

FIG. 3.

occasions I have watched bees take propolis from the surface of wood, and also from old quilts outside the hive, and the operation has been the same in each case.

The drawings in Fig. 1 and 2 will give a clear idea of the work. In Fig. 1, No. 1, the bee has just bitten off a small lump of propolis. No. 2, it is taken by the front feet. No. 3, the front legs are passed to the side and backwards, while the second leg is brought forward the propolis is placed under the spine. Fig. 2, No. 4, the hind leg is brought forward, and the second leg passed backwards until the propolis is brought to the entrance of the tunnel-shaped hairs which encompass the pollen basket. No. 5, the second leg is then drawn sharply forward when the propolis enters under the hairs, No. 6. The process is repeated until the tunnel formed by the hairs is full, after which the propolis is stuck on to the outside of the lump, thus embedding the hairs until a full load has been made.

The method of loading up varies. In some cases the pellets were placed alternately on each leg, while in others one leg was loaded up before a commencement was made on the others.

I took a number of photographs of the bees at work, Fig. 3, the top one shows the lump of propolis a short while after I had observed the bees working on it. The centre photograph an hour or two after from which the amount of propolis carried away by the bees can be judged. The bee at the top had the left leg fully loaded, and was just commencing on the right. The bottom picture shows a further reduction in the lump of propolis and a bee busy loading up. In two days the entire mass was entirely carried away.—W. HERROD-HEMPSALL.

Dealing with Acarine Disease.

The Editor has kindly allowed me to answer two reasonable questions put to me in relation to my advertisement for diseased bees for ex-Service men: one was as to how healthy bees would be after treatment, and the other: why, having had a form of treatment for "Isle of Wight" disease since 1912, I have not advertised bees free from "Isle of Wight" disease. It is quite obvious that having started in 1918 all my apiaries with bees suffering from "Isle of Wight" or Acarine disease, as explained before in these columns, that I have a means of combating this disease. You will also have noted in the previous contribution that another bee-keeper's apiary, started in 1914 with diseased bees, has after my treatment remained free ever since, although on two succeeding years "Isle of Wight" diseased stocks were introduced and treated.

This latter fact some bee-keepers might think to be likely to always occur, but unfortunately that is not so. After treatment it is quite possible for a single bee to contract contagion before leaving my hands, and so spread disease again throughout the stock.

You will, some of you, no doubt, remember why it was impossible, owing to its nature, to send out the remedy used, and the only practicable method of distribution would have been by publication of components, method of mixing and use, therefore, only one which could have been adopted through a national body—such as the Ministry of Agriculture. Their attitude of preferring the recurring mortality in stocks

of bees in this country year after year rather than take it up, had a certain amount to do with the defeat of their proposed Bee Diseases Bill, in which they sought the broadest power possible. Bee-keepers knew my apiaries were started with diseased bees.

Put bluntly, to state that it is possible to go to a stock of bees, take 3, 30 or 300 bees at random, examine for Acari, and on finding none present, to declare that stock free from Acari, or "Isle of Wight" disease as we called it years ago, is in my opinion utterly incorrect. One diseased bee may contaminate the whole stock. I cannot, therefore, in all honesty guarantee any stock as being free from "Isle of Wight" disease, and I endeavour, and shall continue to do so, to avoid doing anything that in my opinion would not be accurate.

The best justification is "deeds not words," so year after year, apiaries are started up from diseased bees, and had I have been stronger much more would have been accomplished. To do this is, I consider, better than talking about it, the risk, such as it is, being my own and not that of someone else, and you may be interested in further experiences as to what is likely to occur when a remedy has been found by any other workers, paid for their work.

The idea of setting up apiaries in good honey districts, which are "well soaked" in disease, appeals to me, and is one I am following out.

Take, for example, one of the control apiaries. Stocks of diseased bees for this particular apiary were, after treatment, given no further treatment, and were placed in the centre of a small area which had a considerable amount of "Isle of Wight" disease. The queens had been substituted by others bred from a strain I consider a good one to resist disease, and are similar to those, four of which in another bee-keeper's hands gave him half a ton of honey in one season. (I might here remark that it is not absolutely necessary to change queens: it was done for the purpose of this experiment.) These stocks in this apiary all remained healthy for three years with no further treatment. Owing to an accident over which we had no control, some diseased bees got into two of these stocks, and as there was a possibility of my taking up the sale of bees these two only had one treatment given them when wintered down. No other treatment has been used there, and to date we have experienced no trouble.

I ought to repeat, as in my former letter, that after 1912 work done by me with disease has been on a limited scale, but even so in 1919-1920 I discovered in my fifty-second experiment another method of treatment which is void of a great drawback inherent in the one discovered in 1911-1912, and is also not so unpleasant to use.

If some bee-keepers are going to continue to seek to give to the Ministry of Agriculture the broadest possible powers, after that body's attitude in regard to mortality in stocks of bees year after year, the amount of "English-produced" honey lost year after year, the amount of money sent abroad for honey year after year, it will be a long time, if ever, in passing a Bill on the lines of the last one laid down.

Eleven years is a long time to wait, but I am quite prepared to wait eleven more, or until those who are being paid to work discover its equal. I spent over a thousand pounds on investigation, and am not going to give it away.

So as not to hurt so many ex-Service men who have been as badly hit by the war, a certain number of whom have agreed to assist each other in the manner indicated by me, get the result of my fifty-second result, and are thereby saved a varying amount of loss dependent upon the amount of disease present in their apiaries. I can write thus bluntly because my apiaries are run for honey production, and I am not hurt pecuniarily by the spiteful attitude of those who would persuade others to neither purchase stocks nor queens from me, and I believe of the large bee-keepers both Mr. Whyte and myself are the only ones who opposed the Bill who come right out in the BRITISH BEE-KEEPERS' JOURNAL with our views.

I am not going to enter into a controversy—have neither time nor inclination—but you have the facts before you why I cannot, in my opinion, guarantee stocks free from "Isle of Wight" disease.

To emphasise that, would you think of taking 30 or 100 people at random in a moderate-sized town and after examining a throat swab from each one, and on failing to find diphtheria, then declare there were no diphtheritic throats in that town? You can only actually tell the condition of bee or person examined, and the remainder is surmise.

Dr. Rennie—"more power to his elbow"—is the only one who has published any considerable amount of work on these Acari. Unfortunately, I have not been able to see all he has written, only digests, and in none of them have I seen any allusion to another interesting factor, and had it have been noted I think it would have been heard of. It leads to a considerable amount of work on other things than bees, will undoubtedly explain "some things which no fella can understand," and I give this hint to those microscopists interested, as I cannot afford the further work it involves.

Brood diseases and Acarine disease are not the only ills stocks suffer from. With so many occupied in the research, it cannot, I think, be long before someone trots out further observations, and, on the other hand, someone may discover it who is not working upon bees at all.

G. THOMAS.

Burwell, Cambs.

British Bee-Keepers' Association.

The monthly meeting of Council was held at 23, Bedford Street, Strand, London, W.C.2, on Thursday, May 18, 1922.

Mr. W. F. Reid presided, and there were also present Miss M. D. Sillar, Miss M. Whyte-Johnstone, Sir Ernest Spencer, Messrs. G. Bryden, A. Richards, J. B. Lamb, F. W. Harper, F. W. Watts, J. Herrod-Hempsall, C. L. M. Eales, A. L. C. Fell, Association representatives; R. R. Babbage (Middlesex), E. G. Waldock and W. E. Hamlin (Surrey), Rev. E. F. Hemming (Hunts.), A. E. Warren and E. Ff. Ball (Bucks.), C. M. J. Winn (Essex).

The minutes of the previous meeting were read and confirmed.

Mrs. M. K. Hodgson and Mr. W. M. Valon were elected members of the Council.

Letters of regret at inability to attend were read from Mrs. Newham, Messrs. G. J. Flashman, E. Walker and W. H. Simms.

Messrs. W. F. Kendall and T. Card were elected members.

The Medway and County Kent Bee-keepers' Association and the West Yorkshire Bee-keepers' Association applied for affiliation, and both were accepted.

The following Associations nominated representatives, and all were accepted:—Glamorgan, Hertford, Ware and District, Carmarthenshire, and Dorset.

The report of the Finance Committee was presented by Mr. Bryden, who stated that payments into the bank in April were £42 12s. 9d. Payments amounting to £50 were recommended.

The bank balance on May 1 was £238 17s.

It was resolved that 200 National Saving Certificates be purchased.

Rev. E. F. Hemming moved, "That the Council be empowered to grant hon. expert certificates to those who have faithfully served the cause of apiculture." After a lengthy discussion, and with the Rev. E. F. Hemming's consent, it was resolved that the matter be left in abeyance for the present, and brought up again at a future date.

Correspondence between the Surrey B.K.A. and the hon. secretary was read and dealt with.

A letter from the Carmarthenshire B.K.A. was also read, and the secretary was instructed to deal with the matter.

The following letter from Mrs. Cowan, written lying in bed ill, was read:—

"Mrs. Cowan desires to acknowledge with many thanks the gift of the very pretty fruit basket which the British bee-keepers have presented to her in conjunction with the testimonial presented to her husband. This kindly thought has been much appreciated."

Next meeting of Council, June 15, 1922, at 23, Bedford Street, Strand, London, W.C.2.

Durham County Bee-Keepers' Association.

ANNUAL MEETING.

The annual general meeting of the above Association was held on Saturday afternoon, April 1, 1922, in the Ambulance Room, N.E.R. passenger station, Bishop Auckland. Mr. A. S. Douglass was voted to the chair.

Letters of regret at inability to attend were read from Col. Roland Burdon, M.P., Castle Eden; Mr. J. S. Giles, South Shields; and Miss Headlam, Whorlton Hall.

The minutes of the last general meeting were read by the Secretary, and on the motion of Mr. D. Henderson, seconded by Mr. A. Wrightson, were adopted and signed.

The Hon. County Secretary then read the report.

Mr. E. T. Gardiner moved, and the Rev. W. H. J. McLean seconded, its adoption, and this was carried unanimously.

The Hon. County Treasurer then read the balance-sheet and report, which stated we had a balance on the right side of £4 19s. 3d., but that had it not been for the very generous gift of our late president, we should have been scarcely able to have paid our way, owing to the cost of printing, postage, etc., being so considerably increased. He appealed to all the members to do their best to increase their subscriptions if possible, and increase the membership by getting others to join. The hon. auditor, Mr. J. W. Robson, had examined all books and vouchers, and certified the same.

Mr. A. Wrightson moved, and Mr. M. H. Greenwell seconded, that the report and balance-sheet be adopted, and this was carried unanimously.

The Chairman then moved that the best thanks of this meeting be accorded to the officers for the services so ably rendered during the year. Carried.

Before the election of officers took place the hon. secretary read a letter from Lady Wrightson, after which the Chairman moved a vote of condolence to Lady Wrightson and family, and this was carried in the customary manner.

The following officers for the year 1922 were elected:—President, Sir Henry Havelock-Allen, Bart., Blackwell, Darlington; hon. treasurer, Edgar T. Gardiner, Esq., Hoppyland House, Bishop Auckland; hon. auditor, J. W. Robson, Esq., Westfield Road, Bishop Auckland; representative to the B.B.K.A., John Watson Egglestone, Esq., Firbeck House, Hutton Avenue, Cockton Hill, Bishop Auckland.

Mr. Egglestone at this juncture asked to be relieved of the office of secretary, and asked the members to elect a successor so that more of his limited time could be devoted to propaganda work, but the meeting, on the motion of the Chairman, unanimously re-elected him again.

Mr. Egglestone, in replying, said he had come with the idea of resigning from the office of secretary, which post he had held for over eight years, and thanked them for the confidence and honour they had reposed in him, and hoping that each one would

endeavour to make the work as pleasant as possible.

Acarine Disease.—The following resolution was moved, and the secretary was instructed to send up a copy to the Ministry of Agriculture and Fisheries :—

"That this Association of Bee-keepers deeply regret that the Bee Diseases Bill, very much overdue, is still delayed, and this meeting sincerely hopes and trusts that this Bill will be shortly placed on the Statute Book, seeing that we are decidedly of the opinion that it is very desirable, and, moreover, essential, that we have legislation dealing with bee diseases, as it is utterly impossible to effectually check the spread, let alone effect a cure, until we have some measure of protection to mitigate the serious damage caused to the bee-keeping industry by the continued prevalence of bee diseases."

The secretary had for the benefit of the meeting a sample of standard and shallow-frame semi-comb, also samples of Airco foundation, and also a complete set of the Bowen wiring outfit for the inspection and criticism of the meeting.

There was an interval, during which those present partook of an excellent tea presided over by Mrs. H. E. Egglestone, the wife of the hon. secretary, and over which new acquaintances were made and apicultural matters discussed at full length.

After tea the Rev. W. J. H. McLean was voted to the chair, and called upon William Herrod Hempsall, Esq., F.E.S., technical adviser to the Ministry of Agriculture and Fisheries, secretary, expert and lecturer to the B.B.K.A., to give us a lecture on "Queen Rearing for Small Apiaries." The lecture was of a very high order, was beautifully illustrated, and was given in splendid style. The advice was given in such a plain, nice, simple manner that practically new beginners in the craft were able to follow the instructions with perfect ease. Many questions were asked on various bee-keeping topics, which were answered by the lecturer in a most creditable manner, and to the entire satisfaction of the inquirers. Votes of thanks to the lecturer and chairman, which were carried unanimously, concluded a very happy, enjoyable, as well as educative time.

Bracknell and District Bee-Keepers' Association.

A meeting was held at Bracknell on April 27, 1922, to discuss the advisability of forming a local Bee-keepers' Association. Mr. B. R. Sandwith, on being elected to the chair, opened the discussion by stating some of the advantages of a local Association, such as co-operative purchase of queens, appliances, etc. : assistance to beginners; during a member's absence on holiday looking after his bees. Mr. W. B. Webster also spoke in favour of forming an Association. Finally it was unanimously decided that an Association be formed, to be called the Bracknell and District Bee-keepers' Association. The minimum subscription to the Association was fixed at 2s. 6d. per annum.

Dr. L. W. Mortimer, of Binfield, was elected chairman, and Mr. D. H. Butler, 6, Park Road, Bracknell, to be hon. secretary.

A meeting to discuss the rules of the Association will be held above Mr. Snell's shop, Bracknell, on May 25, at 7.45 p.m.—D. H. Butler, Hon. Sec., Bracknell and District Bee-keepers' Association.

Bee Shows to Come.

A nominal charge of 2s. 6d. is made for notices (not exceeding 7 lines) in this column, 10 lines charged 3s. 6d. up to 16 lines 5s., which covers cost of insertion from order till date of show. Cash should accompany orders for insertion.

May 24-27 at Guildford.—Surrey B.K.A. Show. Two Challenge Trophies, Apis Club Silver Medal, B.B.K.A. Silver and Bronze Medals and Certificate, Surrey B.K.A. Silver and Bronze Medals, Open Classes Honey, Wax, Appliances, etc., Demonstrations, Lectures, etc.—Hon. Secretary, W. E. Hamlin, 43, Norbury Court Road, Norbury, S.W.16.

May 31.—Hunts Agricultural Show, Huntingdon. Bee Section under the auspices of Hunts Bee-keepers' Association. Open Classes for Combs and Extracted Honey and Wax.—Hon. Sec., F. Tunnington, Thrapston Road, Brampton, Huntingdon. **Entries close May 24.**

June 7 and 8, at Chelmsford.—Essex B.K.A., in conjunction with the Essex Agricultural Society's Diamond Jubilee Show. Apis Club's Silver Medal, Essex Agricultural Society's Silver and Bronze Medals, and also the B.B.K.A. Medals and Certificate, besides many prizes All Classes Open. Lectures and Demonstrations on both days in the Bee Tent by the County Bee Instructor.—Schedules and Entry Forms from Secretary, Essex Bee-keepers' Association, Rawreth, Wickford, Essex. (Stamped, addressed envelope, please.)

Royal Show, Cambridge, July 4 to 8.—Over £40 in prizes. All classes open.—Schedules and all information from Mr. E. C. E. Holloway, Burwell, near Cambridge. **Entries close May 20.**

July 20 and 21.—Lincolnshire Bee-keepers' Association Show of Honey, Wax, Hives, Appliances, etc., at Skegness. Over £30 in prizes. Open and County Classes.—Schedules and Entry Forms from Major J. H. Hadfield, Alford, Lincs. **Entries close on June 19.**

July 22, at Mill Hill, N.W.—In connection with the Flower, Fruit and Vegetable Show, under the auspices of Hale and District Allotment Association. Classes for honey and wax exhibits for competition.—Schedules are ready, and may be obtained by sending stamped, addressed envelope to the Hon. Secretary, Mr. A. Bacon, Yew bank, Tennyson Road, Mill Hill, N.W.7. **Entries close July 15.**

July 26-27, at Cardiff, Sophia Gardens.—Glamorgan Bee-keepers' Association, in connection with Cardiff and County Horticultural Society's Show. Open Classes. Special prizes: Taylor's W.B.C. Hive and Apis Club Bronze Medal.—Schedules from Secretary, Chas. F. Davies, 5, Borstal Avenue, Cardiff.

August 31, 1922.—Winchester Domestic Live Stock Association Show. Schedule of Honey Classes Open :—Class 5, one shallow frame; Class 6, six sections of 1922 honey; Class 7, six 1-lb. screw stoppered bottles of 1922 honey; Class 8, trophy of bee products to be arranged on table space 3 ft. by 3 ft.—Entry Forms to be obtained from M. W. Castle, 80, High Street, Winchester.

September 16 to 22.—British Bee-keepers' Association Annual Show at Grocers' Exhibition, Royal Agricultural Hall, Islington, London.—Schedules from Hon. Secretary, B.B.K.A., 23, Bedford Street, Strand, London, W.C.2. **Entries close certain September 4.**

October 12, at Ongar, in connection with the Ongar and District Agricultural Association.—Extracted and Comb Honey. Open to Essex.—Schedules from G. A. Taylor, Hon. Sec., Ongar and District Bee-keepers' Association, Ashcroft, Ongar.

* Last year we were selling white flint

SCREW-CAP HONEY BOTTLES

20 per cent. below other dealers' prices. We can now offer a limited quantity at the knock-out price of

25/- PER GROSS.

Queens, **5/6**, Stocks, Nuclei on standard or commercial.

COBB BROS.,
33, Bevan Road, Plumstead.

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THREE strong Stocks of Bees for Sale as follows:—One Stock in new W.B.C. Hive, two last year's Swarms, which have worked themselves down to the bar frame, from the tips, all very healthy; also an empty Hive, two Travelling Boxes, quantity of drawn-out Frames, Skeps, etc.; take £15 the lot.—MR. GORDON LANGLEY, Ashley Park Hotel, Walton-on-Thames, Surrey. e.145

BEES.—Few 7-frame Stocks, fit to super, Brown Bees, healthy, wired foundation, W.B.C. ends, standard frames, carriage paid, box to be returned, 55s.; without Queen, 50s.—A. J. RIDLEY, Horney Common, Uckfield, Sussex. e.122

FOR SALE, six Holborn Hives, in perfect condition, £5 the lot, carriage forward; £4 10s. if removed by purchaser.—G. GARDINER, Whiteleaf, Princes Risborough. e.123

FINEST BUCKS CLOVER HONEY for Sale in 28-lb. tins, 1s. 3d. per lb.; tins free; carriage paid.—BURGESS, Newport Pagnell. e.125

PRIME NATURAL SWARMS of healthy Hybrid Bees, 25s. each; cash with order; carriage paid; box free.—W. WOODLEY, Bee Farmer, Beedon, Newbury. e.126

SWARMS, Italian, strong and healthy, 25s.; package returnable.—W. YOXALL, Oaken, Wolverhampton e.133

AM OPEN to buy healthy Stocks.—PRYOR, Breachwood Green, Hertfordshire. e.138

GOOD HIVE, windows in back, 18s.; eight Section Crates, 2s. each; seven Zinc Excluders, 1s. 1d. each; carriage forward. W. ROSE, Westcott Street, near Dorking. e.127

ITALIAN HYBRIDS, Simmins' strain, surplus Stocks on 5 combs, with young Queens, 35s. each, carriage paid; June delivery.—ERNEST GRIFFITHS, Helsby, Cheshire. r.e.128

STOCK OF ITALIAN BEES on 10 standard wired frames, 60s., carriage forward; case returnable.—HUNT, The Croft, Somerford, Christchurch. e.129

CLEAN Second-hand surplus Bee Appliances, good, sound, well-made Combination Hives, Queen Excluders, etc. DAVID HANCOX, Grove Lodge, Deddington, Oxford. r.e.130

FOR SALE, one 13-frame Stock, one 10-frame, and two Skeps of Italian Hybrids, healthy, and hives in splendid condition. Offers.—HOAD, Four Oaks, Beckley, Sussex. r.e.131

SWARMS, guaranteed healthy since apiary established in 1902, good workers, vigorous strain, 7s. lb.; rough weight from 4-6 lbs.; boxes returnable.—LANDIN, 101, New Road, Woodston, Peterboro'. e.134

FOR SALE, 15 good W.B.C. Hives, also Metal Runners, Section Racks and Shallow Frame Boxes.—DRAKE, Chilbolton, Stockbridge. e.135

BEES.—One strong Stock for Sale, wintered well, 10 bars, 75s.; box 10s., returnable.—CARTER, Spath Road, Didsbury, Manchester. e.155

HYBRID ITALIANS.—Stock, strong, healthy, 1921 Queen, £2 15s.; 10s. deposit on returnable box, carriage paid; cash with order.—BROOKS, 81, Petherton Road, London, N.5. e.156

FOR SALE, two 10-frame Stocks of Bees, Hybrids; no disease.—NOYES, Bangors Park, Iver, Bucks. e.156

STRONG 6-frame Stock of Barrat's, free from disease, £3 10s.; box 10s., returnable.—F. W. HARPER, 39, St. James' Road, Watford. e.157

PRINTING PRESS, metal type, accessories, 22s. 6d.—Particulars, W. WEBSTER, 291, Normanton Road, Derby. e

BEING ILL must sell Stocks, ready for supering, 65s.; Nucleus, 35s.; carriage paid.—W GREEN, Laindon, Essex. e.159

FOR Sale, several strong pure Italian Stocks on 10 frames each, all wired, 1921 Queens, 70s. each; box 10s., returnable.—W. EMERTON, Apiary House, Chalton, near Dunstable, Beds. e.102

SWARMS.—Any weight supplied at lowest rates with young fertile Queen. — HARVEY, Apiarist, Andover. r.d.90

BOOKING SWARMS from healthy English Bees.—H. SAUNDRY, Sennen, S.O., Cornwall. e.95

MAN requires situation as Bee-keeper; help in garden or nursery; only living wage required.—Box 66, B.B.J. Office, 23, Bedford Street, Strand, W.C.2. e.50

I HAVE still a few 8-frame Stocks Italian Bees for Sale at £3 15s. per stock, f.o.r.—DOBSON, Hunton Bridge, Herts. r.e.57

NATURAL healthy Dutch-Italian Swarms, 30s.; second, 25s.; cash with order; box returnable.—J. BOYES, Bee-keeper, Snainton, Yorks. r.e.59

NATURAL SWARMS from bar-frame hive, 30s each. Orders booked.—NORTH, Notley, Witham, Essex. r.e.80

For best bees, queens and appliances come to PEARSON & GALE, Marlborough.

PENNA QUEENS.

Address:—E. PENNA, Casella Postale 178, Bologna, Italy.

PRICE LIST FOR 1922.

	May.	June.	July.	August.	September.
One Young Pure Fertile Italian Queen	10/-	9/-	8/-	8/-	8/-

SPECIAL OFFERS, until countermanded, for queens in lots of 4 at a time: From June 10th to June 30th, **£1 8s.**; from July 1st to July 31st, **£1 4s.** Orders booked in rotation, cash with order, carriage paid, safe arrival guaranteed. Payment by cheques or British postal orders. International money orders are **not** accepted. 10% discount to Apis Club members on my prices, **except** on "Special Offers."

A BARGAIN.—American Standard Hives, six only, made up, with 10 wired and waxed Langstroth brood frames and one section rack fitted with 24 waxed sections, 38s. each, carriage paid.—S. H. SMITH, 30, Maid's Causeway, Cambridge. e.144

A FEW strong, healthy Stocks of Bees for Sale. Natives, on 9, 10 and 12 standard bars, price from £4 each; 10s. on travelling box, refunded on return. — WOOD, Cowmires, Galphay, Ripon, Yorks. e.r.86

STRONG HEALTHY SWARMS for Sale from mid-May, 27s. 6d., carriage paid. Cash with order. Boxes and frames returnable.—PULLEN, Ramsbury, Hungerford. r.e.37

SELL.—Rotax all-brass Motor Car Head Lamps, self-contained acetylene, very powerful, 30s. the pair; two small powerful Acetylene Brass Head Lamps, with separate generator, suitable light car or cycle car, £3 the set; Austin Rear Wind Screen, mahogany framework, £7; Mills' Automatic Acetylene Generating Plant, suitable for 10-roomed house, £6; quantity of Acetylene Gas Brackets and Chandeliers, prices with particulars; small folding Magic Lantern, 30s.; motor cycle all-rubber Ponco, reaches to ankles, wind- and weather-proof neck and sleeves, 59s.; all carriage forward. — HERROD-HEMPSALL, Old Bedford Road, Luton, Beds. c.77

BUSINESS ADVERTISEMENTS.
1½d. per word.

THE WISE BEE-KEEPER looks for quality. The South Hampshire Apiaries breed only from the very best strains. Result: Quality and satisfaction. Beginners' Outfits from £5.—All communications, H. E. NEWTON, New Milton, Hants.

STRONG, healthy Swarms, in new cane-bound skeps, 27s. 6d.; 5-frame Nuclei, 27s. 6d.; Dutch-Italian 1922 Queen; box 5s., returnable.—H. SEAMARK, Skep Works, Willingham, Cambs. r.e.139

THE finest 4-frame Nuclei procurable, headed by 1922 "Utility" or imported Italian Queen, 35s., carriage paid; box 10s., returnable.—LEE, the Beeman, Burgess Hill, Sussex. r.e.150

CAMBS. NATURAL SWARMS, as they come. Black, Hybrid or Italian, up to June 28 only, 30s.; Italian Bee Stocks, delivery any day from May 29-June 29, 8 frames, £3 15s.—S. H. SMITH, 30, Maid's Causeway, Cambridge. e.71

PENNA'S ITALIANS, 3 frames, £1 10s.; headed 1922 imported Queens, £1 12s. 6d.; extra frames, 8s. 6d.; carriage paid; satisfaction guaranteed.—R. TINSON, Sutton Courtenay, Abingdon, Berks. e.124

GOLDEN ITALIAN QUEENS.—These superior British-reared Queens need no recommendation. Goldens, 10s. 6d.; Three-bands, 8s. 6d.—E. COOMBER, Queen Breeder, 64, Ronald Park Avenue, Westcliff-on-Sea. e.132

BUYERS of Sections and English Run Honey are THE VIKING FOOD & ESSENCE CO., 12, Brandon Road, King's Cross, who will be pleased to purchase and receive offers. r.e.136

IMPORTED CARNIOLAN QUEENS.—Try the Manser breed, none better. 9s. each. June. Send for list.—B. WOODLEY, Thorne, near Doncaster. r.e.137

TWO GROSS ⅞ Ends, new, 5s., post free.—MISS ADAMS, Dunton, Biggleswade. ?

BLACK and Mis-mated 1921 Queens, clipped and unclipped, 5s. 6d. each; imported Italian Queens, mostly clipped, 1922 reared, 9s. each.—THOMAS, Barrle Cottage, Exning. e.152

IMPORTED ITALIAN QUEENS, Penna's or Fortora's, June, 9s.; prompt delivery; Nuclei, 3-frame, 35s., headed imported Queens.—HENSLEY, Luton Apiary, Chatham. r.e.153

A FEW strong, healthy Swarms for disposal, 35s. each; also 3-frame Nuclei lots same price; 10s. on each box, refunded on return.—WOOD, Cowmires, Galphay, near Ripon. r.e.154

VIRGIN ITALIAN QUEENS, 5s.—TICKELL.

FERTILE QUEENS, 12s.; Hybrids, 11s.—TICKELL.

IMMEDIATE DELIVERY.—A few only. Hybrid Stocks, 6 or 8 frames, 70s., 90s.; Nuclei, 3 or 4 frames, 40s., 50s.; carriage paid; boxes 10s., returnable.—TICKELL.

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WINTERED GOLDEN NUCLEI, full of brood, 4 frames, 42s.; 6 frames, 76s.; August-hatched Golden Queens, 10s. 6d., by return; Hybrid Stocks, 10 frames £4, 8 frames £3 5s. Swarms booked.—LILLEY, Lamarsh, Bures, Suffolk. e.108

TORTORA'S choice fertile Italian Queens are the best. May, 9s. 6d.; June, 8s. 6d.; July onwards, 7s. 6d.; reduction for five; safe arrival.—Sole Agent, HULBERT, "Châlet," Warwick Road, Olton, Birmingham. r.e.112

WHILE THEY LAST.—Four Tortora Queens, June 28s., July 24s., August 20s.—HULBERT, above. e.140

STRONG 4-frame Nuclei, pure-bred Italian, price £2, carriage forward; box returnable, charged 10s.—Old Henwick Farm, Newbury e.115

BEE-KEEPING.—Vacancies for three Gentlemen Pupils in all branches, theory and practical; residence if required.—BARUCH-BLAKER, Warrilow Apiary, Barnham, Bognor. r.e.91

DUTCH BEES.—3- and 4-frame Nuclei, 30s. and 40s., packed with brood, June delivery, carriage free; travelling box 10s., returnable if carriage paid; guaranteed healthy and strong; cash with order.—E. LANG, 124, Canterbury Street, Chorley, Lancashire. r.e.70

PURE ITALIANS, 1922 Penna or Buckfast Queens.—4-frame Nuclei, 45s.; 6-frame, 50s., carriage paid, June-July; 10-frame Stocks, 1921 Queens, immediate delivery, 75s. — WADHAM, Gold Street, Cardiff. r.e.62

BRITAIN'S BEST BEES, as supplied by me to the Board of Agriculture. 6-frame Stocks, 45s.—LEE, the Beeman, Burgess Hill, Sussex. r.e.87

ITALIANS, Nuclei, genuine 1922 Penna Queens, 3-frame, 40s.; box 10s., returnable; Penna 1922 Queens, 11s. each, delivery end May.—ASTBURY, "West Farleigh," Wylde Green, Birmingham. r.e.69

SWARMS AND NUCLEI for Sale, Italian, Dutch and Hybrid; very best strains; lowest prices.—WILKES, Pelsall, Walsall. r.e.10

STOCKS genuine Swiss Bees for Sale. Write for Descriptive Circular. — DAVIDSON, Forest Road, Burton-on-Trent. c.195

SWARMS BOOKED, May delivery, Italian, Carniolan, Dutch; low prices.—DAVIDSON, Forest Road, Burton-on-Trent. c.198

STRONG STOCKS healthy Dutch Bees in Skeps; reduced prices; immediate delivery. Write actual importer. — DAVIDSON, Forest Road, Burton-on-Trent. c.196

ITALIAN, Carniolan and Hybrid Stocks and Nuclei for Sale, strong and healthy, delivery May, low prices.—DAVIDSON, Forest Road, Burton-on-Trent. c.197

JACK TICKELL.—For Queens, Stocks and Nuclei. List free. — Westbourne Apiary, Cheltenham. r.a.54

HARDY PROLIFIC ITALIANS (Penna strain), every colony wintered, 3-frame Nuclei with 1922 Queen, 35s. each, carriage paid; 5s. extra for box, returnable; additional frames 8s. 6d. each.—ERNEST BLISS, "Ranmoor," Dunstable, Beds. d.91

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We are glad to be able to announce a

REDUCTION in the Price of SCREW TOP HONEY BOTTLES from 40/- per gross to 35/- per gross.

E. H. TAYLOR, Ltd., BEEHIVE WORKS, WELWYN, HERTS.

SWARMS, Italians, good workers, free from disease, 30s. and 21s.; Stocks, 60s.; carriage forward.—GIBBS BROTHERS, 7, High Street, Albrighton, Wolverhampton. r.e.55

TO BEGINNERS and others wishing to increase their stock.—Italian Hybrids, 3-frame Nuclei, delivery about June 10 next, 1922 Queens, price 35s. each.—HOSEGOOD, Beecot, Cliff End, Purley, Surrey. r.e.1

ITALIANS.—Nuclei, 1922 Queens, 3 frames, May 40s., June 32s.; Colonies, 6, 8, 10 frames, 50s., 62s., 73s.; returnable crates.—ATKINSON, Fakenham. r.e.32

CHOICEST BRITISH GOLDEN 10-frame Colonies, 80s.; 6-frame, 58s.; returnable crates.—ATKINSON, Fakenham. r.e.33

I DESPATCH pure Italian fertiles by return post.—ATKINSON, Fakenham. r.e.34

FINEST ITALIAN NUCLEI, with Cannell's imported 1922 American Beauty Queens; satisfaction absolutely guaranteed; May, 3-frame 45s., 4-frame 55s.; June, 40s. and 47s. 6d.; carriage paid; travelling boxes returnable.—HOGAN, Boxford, Suffolk. d.71

THE 1922 15-frame "Thames" Hive for 28s. r.d.72

FINE, healthy, vigorous, natural-reared "Cleopatra" Stocks from THE THAMES VALLEY BEES (Regd.), Teddington. r.d.73

DUTCH, ITALIANS, HYBRIDS. — 6-frame Stocks, 45s.; 4-frame Nuclei, 35s.; Swarms, 25s.; May delivery; carriage paid.—LEE, The Beeman, Burgess Hill, Sussex. r.d.69

LANGSTROTH HIVES. — Perfectly simple, simply perfect, international standard; as efficient in this country as elsewhere; make the bees pay; our speciality. All Accessories. Swarms of Bees. Finest Queens.—DICKINSON & OWEN, LTD., 25, Bartlett's Buildings, Holborn Circus, London, E.C.4. 'Phone, Holborn 824. Equipment in British sizes to special order. Illustrated Catalogue now ready, post free. r.d.35

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HAVE YOU READ "THE BEE WORLD"? If not, why not? Every number in itself is a useful literary work for practice and reference. Specimen copy free.—Offices: THE APIS CLUB, Port Hill House, Benson, Oxon.

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GREATER HONEY PRODUCTION.

Settled bee weather has at last prevailed and no time should now be lost in completing your outfit for the honey harvest. You cannot shut your eyes to the enormous advantages of fitting your extracting supers with:

Adminson's Semicombs.

They mean: (1) supreme utility for a lifetime, with ordinary care, (2) saving honey used in unnecessary wax building (3) safety in extracting and storage, (4) the possibility of extracting dense honey, (5) adaptability to fumigation.

Their benefits are obvious to any thinking beekeeper. They save their cost in one season. They can be used *with equal success* over a brood chamber containing wax combs or metal combs, and should therefore appeal to *all* beekeepers. If you cannot buy all that you need at once, do not delay making a start. Have sufficient foresight and *order now*. Every specimen is perfect—a fine piece of workmanship by one of the leading engineering houses in this country.

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Metal combs are already in use in tens of thousands all over the world, with excellent results. Metal comb honey classes (open) are again available this season at many leading shows. Why not compete.

Obtainable from: All leading appliance dealers in the British Isles.

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DUTCH BEES.—Send for my artistically Illustrated Catalogue outlining my method of managing bees profitably. Read my notes on Queens and Queen Rearing. Will interest the expert and amateur. Free for the asking.—WHYTE, Bee Farm, Cumbernauld Station, Dumbartonshire. r.b.32

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HIGHLAND AND AGRICULTURAL SOCIETY.
DUMFRIES SHOW, 18th-21st JULY.

Entries close for CATTLE, HORSES, SHEEP, GOATS, PIGS, POULTRY, DAIRY PRODUCE, BEE APPLIANCES & HONEY, WOOL, RURAL INDUSTRIES and HORSE-SHOEING on June 1. Premium List and Entry Forms from JOHN STIRTON, 3, George IV. Bridge, Edinburgh.

THE
British Bee-Keepers' Association.

Insure *now* against loss by damage done through bee stings. All particulars from

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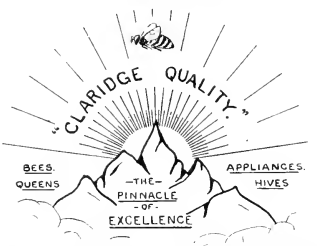

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QUICK DESPATCH

The Bee-Keepers' Calendar.

JUNE, 1922

1 Thursday. "Is it that Summer's forsaken our valleys,
And grim, surly winter is near?
No, No! the bees humming round the gay roses
Proclaim it the pride of the year."
Burns, "Where are the Joys?"

2 Friday. "Cupid, as he lay among
Roses, by a Bee was stung.
Whereupon in anger flying
To his mother, said thus crying:
Help! O help! your Boy's a-dying."
Herrick, "The Wounded Cupid."

3 Saturday. "Shall I answer the call of the counting room
Or the call of the bees on the clover bloom?
Oh! where lies my profit in years to come—
In ledgers that balance or bees that hum?"
Grace Allen, "The Question" (from Gleanings).

4 Sunday. "For butter and honey shall everyone eat that is left in the land."—*Isaiah* vii. 22.

5 Monday. "A swarm of bees in June
Is worth a silver spoon."

6 Tuesday. "Dear Rose, thy term is reached,
Thy leaf hangs loose and bleached:
Bees pass it unimpeached."
Browning, "Women and Roses."

7 Wednesday. "Not less the bee would range her cells,
The furry prickle fire the dells,
The foxglove cluster dappled bells."
Tennyson, "The Two Voices."

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Seasonable Hints.

The warm weather has wrought a most wonderful transformation in garden and fields. After being held back by the cold weather of early spring, everything appears to have burst into bloom at once. Chestnuts, laburnum, and the may bloom are a perfect picture, especially the may bloom. In our own district the hedgerows are white with it, and the nectar can be seen glistening at the base of the flower. The bees were having a busy time

among it during the bright sunshine of Sunday last. Swarms are numerous now, and we read of one stock from which three swarms issued in 36 hours. Bees should not be cramped for room, but supers should be in position before the brood combs are choked with the abundance of nectar and pollen now available. When increase is desired, no better time than the present hot weather could be chosen to make nuclei. When made early in the year during favourable weather a nucleus will often work up in time to take advantage of a late honey flow. The main honey flow is not yet, but if the needed rain comes it may be here with a rush, and those bee-keepers who are prepared with plenty of fitted shallow comb boxes and section racks will benefit from their foresight by securing a good harvest of honey.

The Journal (for this week only) consists of 24 pages. We, like our readers, would be pleased to continue with this size, or even with 20 pages, but we are unable to do so owing to the cost. A Journal of 24 pages every week would mean an addition to our printing bill alone of about £600 per annum; to that must be added cost of paper, altogether a sum we are unable to afford.

From this issue the post free subscription to the Journal will be 10s. 10d. per annum, as the postage is now reduced to a halfpenny. The date of expiry of subscriptions sent at the previous rate of 13s. per annum will be carried forward to cover the amount of balance due to lower postage.

A Dorset Yarn.

"Let us be content to work—to do the things we can, and not presume to fret because it's so little."

During this last month I have met many bee-keepers who have had stocks lost through robbing, some only one out of six left; others, because they lost one out of six, even quite downhearted over the losses. One man at a farmers' meeting said all were gone. Would buy any swarms that were to be had. This is the man who will win, some never will be beaten; they are "content to work, not fret." It is nice to meet such men; this pertinacity of purpose is bound to meet with its reward.

Another had five bar-hives and one skep, all came through strong; the bar-hives had a rack of partly filled sections on each all winter. He was boasting of racks nearly full of honey, but when they came to be examined the queen had been up in them and drones in great numbers were developing. "What can I do with them?" was the query the next time we met. Could only tell him what I had done when this happened—cut them out and give to the chickens; it will lose him a week of good weather. If the larvæ develop and the sections are filled there is a mark in them when cut for use; he could not sell them with any credit to himself. If he does not get quite so much surplus he must learn his lesson. He has the queen excluder on now, and other sections for the bees to work in. He has nearly two acres of raspberries, logans and strawberries, all close to his bees, another ten acres within a hundred yards, so they should do well. He is "content to work," he must not "fret because it is so little." Some bee-keepers are so pessimistic, and foresee another dry summer; they think there will not be a wealth of surplus. Ours are doing well now (that is, some of the best of them); one which has not swarmed has three racks of 1-lb. sections and one rack of 2-lb. ones. Another that has not swarmed, but had three combs taken out of it in early May, has three; some have three (without a queen excluder) and have not swarmed. There are but few drones as yet on the wing, but some of the combs have a lot developing. Drones in quantity are not wanted at the Violet Farm, we want surplus honey.

Our gooseberries and currants are formed; bees have done their work in pollenising them. Plums and pears look like a record crop. Bees are now on logans and raspberries, with the late flowering apples like "Lane's Albert" and "Newton Wonder." This early food has given us the population, now we look for surplus honey. We have a board on the farmyard wall by the side of the main road on which is printed, "Fruit, Flowers and Honey." The second day after it was put up a car stopped for two lots, they are content to wait till one can take out a section from the hive so long as it is to be had. These sections are partly filled ones of last year; they were stored away and given the bees to finish off this season. Some are from racks that were left on all winter, they are on the top of threes and fours, some on double brood chambers. Visitors can scarcely credit it is bees from entrance at bottom to glass covers at the top, but the bee-keeper reader will know that two brood chambers lift the height up a good bit, then with a rack of 2-lb. sections and another of 1-lb. sections in addition they are raised very considerably. We are "content to work, to do the thing we can, and not fret because it is so little."

We have made a beginning with sales of honey: much as we delight to have to do with bees, it is more satisfactory to see day after day something adding to the profits of the farm. We used to think that we knew all about bees and what they will produce, but each year we can get more from these hives that do not swarm. A heavy swarm in May, if put on drawn-out combs, will at once start filling another brood box of standard bars. A heavy swarm from a neighbour's lot (who had no other hive to put them in, so handed them over to me till he had a new one, and I am to give him some

combs and the queen when ready for them) were run into one lot of combs on the Sunday night, and an extra lot of standards were placed over them on Monday. By Saturday the outside comb of the lot was filled with the shining liquid on the inner side. These were all combs that had been extracted. They needed a lot of repairing by the bees before they could store, yet they had been storing surplus each day in the upper lot. They have now a rack of 2-lb. sections on the top, with an excluder under it. This Sunday morning (May 28), by eight o'clock crowds of bees were under the glass covering; this lot will give me a good surplus of high-grade honey before any new bees are developed.

Books tell us that the old queen always goes with the swarm, but the queen that ran in with this lot looked like a virgin, so small and slender was she; if they had requeened themselves it will be longer before the new brood can be out to work. One of our Bishops tells us that "Presumption and self-sufficiency are sobered down by knowledge." No two stocks seem to do exactly as each other. Yesterday a huge swarm came out of a bar hive and started clustering on the stem of a tree over the wall; within ten minutes they all went back, covering the whole of the hive, they could not enter fast enough. Now this stock is very strong, but must have re-queened itself, or she would not come back. There was no sign of a queen cell the first week in May when the surplus racks were put on. They were given two; at that time the under one had all full foundation, the upper one had the partly filled comb of last season. This was a strong lot and had wintered well, has three racks of sections. The lower one was drawn out and nearly filled in the last week; have never seen honey gathered faster in any one week in May before. If this is so here, it must be so all over the country; bee-ke-pers ought to be unusually contented, not "fret because the little they do.'

Look after the bees, give them plenty of room to work; they will not fail you. Have plenty of standard bars all wired with full sheets of brood foundation; do not make a mistake and put in starters, but whole sheets, the less likely to get drone cells built in them. Now it is hot they will draw them out in quick time if given to strong stocks; they will start in them much quicker if a comb from another hive that has some honey is placed in the centre of the new lot of bars; they fill them and cap them so much quicker now the weather is hot. Either the nectar has less water in it, or the great heat makes it evaporate faster.

In the "Calendar" this week, for May 31, it is "brushing ankle deep in flowers." In our fields it is up to the knee and full of bees; at each step the bees fly up as if they resented any intrusion among them; in some of the pasture fields there are such a variety of flowers that are useful for bees.—J. J. Kettle.

Jottings from Huntingdonshire

Chestnuts, pink and white, are calling the honey flies, and not in vain. Who would have thought a month ago that by Empire Day these trees would be a mass of bloom. The set-back to spring of April's cold winds, and the nips of early May have not succeeded in "bidding chestnuts blossom forth belated flowers." The whole sequence of bloom and enfoliation has been disturbed, yet the chestnuts blossomed forth as if this spring were as early as the last. Other trees are playing pranks; here we see the ash and oak more forward than the wych elms. This happens so rarely that one wonders what it foretells. True, the elm blossom was well worked this year by the bees, and this often checks the growing of the leaf, but comparing the myriads of elm flowers with the number of bees about, it cannot be that all these blooms were worked. The last time the elms brought up the rear the year was an excellent one for the bees, and much honey was stored above and within the brood boxes. Those unfortunate people who have no bees of sufficient strength for supering now will be sorry, for the whole country side is flowing with nectar. The white-thorn, now at its best, and the acres of winter beans offer nectar to those bees who ignore the chestnut bloom; while pollen of all shades can be gathered in every field.

The heat being intense, supplying additional ventilation is a duty every apiarist owes to his bees, unless he wishes to see them hanging in clusters round and about the alighting board. I have often wished that hive-makers considered a floor-board without a ventilator incomplete. Holes covered by perforated zinc are not enough, the holes get choked with débris, and before winter sets in propolised over. The floor-board opening should have no zinc on the upper side, but should be opened or closed by a sliding shutter, on one end of which is a hole similar in size to the floor-board hole covered with perforated zinc, the other end being, of course, plain wood. These shutters should be made in pairs, so that as the one is drawn out to be cleaned the other can be pushed along to take its place.

Queen introduction is once more the topic of the day. I wish more people would try direct introduction. I do not wish anyone to run the risk of losing valuable bee mothers, hence why I feel sure that direct introduction is often the surest way, providing it is done at the psychological moment. Despite the fact that bees do much mechanically, they do reason things out, and, like human beings, in doing so sometimes err. Now, what happens when we take a

queen away from a colony? As soon as it is discovered a great consternation seizes the younger bees, this soon spreads as the older bees return from foraging, many of them go rushing about as if to seek for her. Then there is the anger phase, when the bees, irritated by their unsuccessful search are ready to sting anything that gets within a few yards of the hive; birds, frogs, horses, dogs, cats, rabbits, or aught else are liable to attack. This phase soon passes, the little creatures fill themselves with honey, and then commences a search round and about the hive. They search the roof and look diligently to see if by chance she may be hiding beneath the eaves, and even look between the fitments of the lifts. On the second day after removal the workers guarding the entrance will be bees which on the previous day had been searching for her majesty, and will, therefore, be in a state of hope that the queen may return. Towards the evening of this day is the moment to place your new queen on the alighting board; she will run towards the entrance and be admitted gladly. True, some of the bees within will look at her with amusing amazement, as if they would like to ask her where she had been to change herself so. She, too, will be ill at ease for a short time. Within a day or so, however, all will be well. I have also taken up a comb, placed the new queen on it and returned to the hive, when all has gone well. Needless to say, when a queen arrives by post, if there is no queenless colony waiting for her, and requeening is contemplated, the cage should be placed over the brood nest immediately the old queen has been removed. But I must not trespass on Mr. S. H. Smith's preserves. He will doubtless unfold to us new methods he has tried with success.

The *Daily Mail* has done something towards stimulating interest in bee-keeping, but I wish the pictorial editor of that paper would submit photographs dealing with bees to the *Mail's* bee expert. A day or two ago we saw a photograph of a man holding a comb of bees in a manner no one who knew his book would dream of doing—at right angles to his body. Supposing some novice did the same with a frame of brood raised on foundation which had not been wired, what a shock he would have, especially when the thermometer was recording a shade temperature at 86! Beneath the picture we are told that bees can be handled without any protection, etc. If handled properly they never sting. There is an element of truth in this, but it is a dangerous truth. Anyone who is firm and composed can handle bees when "all in the garden's lovely," and discard veils, but beginners are led astray with such pictures. There comes a time when supers must be finally taken off at the wintering down season. Bees are not always so docile at Michaelmas as on midsummer's day.—E. F. HEMMING, Steeple Gidding.

P.S.—A kindly person sent us a few plants for "the flying corps." I was away when they arrived, and by my return they had perished. Thanks to whoever the sender was.

Week-End Bee-Keeping.

BY S. H. SMITH.

(*Continued from page* 248.)

All ready? Movement No. 1. Give plenty of smoke, but not enough to daze them. Wait for it to take effect. Hear that hum? It sounds bad, but the bees are only trying to clear the air. We rap a few times sharply on the sides of the brood-chambers to announce visitors coming. If no protesting bees pour out looking for trouble the stock is ready for opening.

Movement No. 2. The hive tool pushes its way in easily. Crack! That has started it. Now puff away, "D. B.," to keep the bees back. It is surprising how they can creep out of the tiniest cracks. A twist or two of the hive tool, then a run with it over the metal-ends—now in front—all free.

Movement No. 3. The carbolic cloth please, and now—Heave ho!

Quiet as mice. Not one stinger on our clothes nor in the air.

Hive No. 2. This one is easy, there are few brace combs. Let us time ourselves. There are always some brace combs. Bees don't jump or fly from comb to comb when in the hive: they walk and use the brace combs as ladders to go up or down stairs. Please remove the carbolic cloth. Time? One minute. Fair, but no record.

Hive No. 3. Try your hand at this one, "D. B.," and I will use the smoker. Take it easy; there is plenty of time. Hey, there! Don't bump the cargo; let the top box down gently, if you have to. Look at those dozen or so of heads sticking out between the boxes, the bodies are mashed as flat as pancakes. Stings? Tell your troubles to a policeman. Time? Three minutes.

Hive No. 4. At it again if you feel equal to it, "D. B." I've a job on hand pulling out a dozen stings you've sent this way. What! again? What else can a bee do if you squeeze it between your fingers? Good! You put down that load just right.

That is all there is to it, "D. B." We just divide the stocks and go away. When we return in 15-30 minutes the bees tell us in which brood-chambers the queens are. It is very simple. There is no fussing or pawing over of the combs. Of course, if we wanted to see the queens we should have to go through the same performance we went through last week.

Light your pipe and we will adjourn to the honey house and inspect those four queens. I was going to divide six stocks, but I can't spare the queens to day. Quite so. Bee punctures do engender a slight irritability, and you had your share of them, I believe you. And now, dear boy, you will understand just why I wanted you to do some work in my apiary before doing stunts in yours. That is why I lent you the extra brood-chambers, etc., and doubled our stocks when they were here. Strategy and tactics may, as you say, have something to do with

it, but it was really to protect your poor wife and children from outbursts of temper on your part. Such language! Me? I've been Job himself, I'm sure.

Here's a magnifying glass. Take a look at a queen. "D. B." We particularly want her majesty to have her full complement of six sound legs. She needs all of them to do her duties properly. Certainly, she is smaller than those we saw in the hives last week. They were laying, in full profit, so to speak. These have been a week in the mails and fed only on the queen candy in the cages. After a few days of feeding by the nurse bees they will fill out, and you would hardly recognise them as the same queens.

We fill up the partly emptied candy holes in the cages with queen candy. We make this at least ten days ahead, so that it is neither too moist nor too dry. Now let us carry the queens to the stocks and see what the bees have to tell us.

Hive No. 1. The bees on the old stand are quiet. Those on the new stand are running around uneasily. This simple diagnosis tells us all we want to know. Where they are quiet, there is the queen.

Lend a hand and we will move the uneasy bees on the new stand about 6 ft. away. I put the stands close by to make the lifting easier.

A puff or two under the quilts and we look into the brood chamber. Sometimes we have to subtract a comb or add more bees. All is well here. Plenty of bees running over the combs and moaning, and numerous enough to attend to all household duties. We remove the cardboard covering the wire cloth, also the little piece covering the little hole leading from the outside to the candy. We place the cage wire cloth side down over the centre combs, replace the quilts, and we shall not bother those bees again for a whole week.

Ah! you notice the change in tune. It works like magic. The wireless signals are sending the good news through the stock, and in a very short time all the bees will know that a queen is with them again, and all this running about will cease.

Hive No. 2. The uneasy bees are on the old stand. What shall we do. "D. B."? Change places! My compliments. A little smoke, and—presto! we have them where we want them. Take the cage and introduce the lady yourself. Correct. Cover them up.

Hive No. 3. Not enough attendance here in the queenless part. We must shake the bees off a comb from the queen-right part. Ping! It's a knack easily acquired. Please place the queen cage.

Hive No. 4. About the same conditions as were observable in No. 1. *En route* to queen bee No. 4.

Sufficiency for to-day, "D. B." You will agree that these big stocks are easy propositions. Your experiences have been a bit painful, but you are gaining confidence and you have the flair, you know.

(*To be continued.*)

Notes from Gretna Green.

The Outlook.—A belated season so far, very little new honey and no drones seen until May 21—about a month later than usual.

Last summer the clover flow began on June 15, but will probably be later on this occasion, and allow more time for the backward colonies to make much needed progress.

Stocks that were of identical strength in autumn are very dissimilar now, and while the forward ones have already been divided the laggards will probably need uniting—two into one—to get any surplus at all.

Safe Wintering.—This may not seem a seasonable topic, but I believe that the foundation of next year's success must be well and truly laid in the present summer.

The question of winter stores is responsible for much difference of opinion among leading bee-keepers. Simmins advocates the removal of all natural stores in autumn, followed by heavy feeding with medicated syrup, while Abushâdy suggests extracting the honey and feeding back same after medication. Smith recommends wintering on fully ripened honey gathered during the white clover flow in preference to late-gathered, unripe stores. Personally, I consider this teaching thoroughly sound, and always super certain colonies with a view to getting heavy combs of fully sealed honey for winter use.

But even this will be of no avail unless the occupants of the hive have stamina enough to take them safely through the trying experiences of winter, and emerge in spring stronger than when closed down. It is obvious that stamina must be an inherited trait, and if the parents lack vigour their offspring will be similarly deficient. When queens and drones are reared under favourable conditions their progeny may be expected to inherit full activity of nutrition and function, winter well, and prove resistant to *Tarsonemus woodi*.

The reason why Acarine disease has failed to wipe out the bee-keeping industry in this country is that those stocks which happened to breed correctly—vigorous queens to vigorous drones—have withstood mite attacks and survived to carry on the race.

I have no confidence in cell grafted queens, or those reared during a dearth of honey.

The most profitable colony I ever had was headed by a supersedure queen reared *and hatched* in a strong stock during the previous year's honey flow.

Modern methods of using full sheets worker foundation tend to relegate drone-rearing to converted worker cells and odd corners, whereas it is essential that breeding drones should be nurtured in the centre of a strong colony.

I have no hesitation in advocating the rearing on natural lines of more virile queens and drones as a specific for Acarine disease, wintering troubles and spring dwindling.—J. M. Ellis.

On Queenlessness.—II.

There is only one practical way, that I know, of supplying queens for stocks found queenless in early spring, and that is by wintering a number of small lots or nuclei, one of which may be de-queened and united with its neighbour as often as a queen is required.

Here I know that I am running counter to orthodox opinion on the subject of wintering. Some progressive bee-keepers, such as Mr. Bryden, have it is true for some time wintered small nuclei indoors; but the great body of expert opinion, both oral and written, declares that it is impossible to winter nuclei, and that anything under six combs will succumb unless it is united with another lot to make it strong enough to survive.

Well, in the face of such testimony I deliberately advise the apiarist with a fair number of stocks to winter as many nuclei as he thinks he will require for re-queening, and if he only attends carefully to certain important details he will winter these nuclei as successfully as larger stocks.

I have myself, for a number of years now, wintered every year a fair number of these small nuclei, to supply myself and friends with queens in early spring. They are housed in ordinary single-walled hives, quite in the open; and no special effort is made to render them particularly strong. Indeed, they are not made up, as a rule, until expert opinion has realised that the season for nuclei is hopelessly over, and when they go into winter quarters some of them approximate more to Cheshire's description of "a teacupful of bees on two combs" than to anything else.

Out of some sixty nuclei wintered thus in the last five years I have not lost more than three. I am not sure whether I should have lost even these if I had refrained from attempting to winter nuclei of what may be called "fancy" bees.

Now, just why these nuclei should survive and prosper in defiance of all the conventions I am quite unable to say. I cannot point to any one detail and say that there is the secret of success. Perhaps careful attention to a number of ordinary details necessary to the successful wintering of stocks of any size, has more to do with it than anything else. What these are I will enumerate:

A warm, dry, comfortable hive. Damp is fatal.

Plenty of warm, dry quilts.

A wind-break from north and east winds. The value of this has been demonstrated by experiments in America.

Hive so placed as to be warmed and dried by chance gleams of winter sunshine.

A sufficiency of good natural stores.

A hardy strain of bees.

The question of stores is important, but not vital. Some of my nuclei winter on candy alone. But if candy is given care should be taken that it is not too soft; and the waterproof paper should not be removed or two evils will result—the quilts will abstract the moisture and grow damp, and the candy become rigid and useless. If one or two small holes are made in the bottom of the paper the bees will find their way to the contents quite readily.

By far the most important point in the wintering of nuclei is the selection of a vigorous strain of bees. Those that I have been successful with were Ligurians of not too bright a colour. The pure blacks do not do so well, and the goldens are hopeless. I am sorry to have to say this, because the goldens were favourites of mine, and I should have liked them to succeed. Even in large lots I found them to winter very badly, and I am afraid they cannot be regarded as a successful economic proposition.

I have heard this weakness of goldens attributed to in-breeding: but it is a singular thing that when one gets a particularly bright queen out of a vigorous strain of Ligurians, that have never been in-bred, the same defect is sure to appear. The bees themselves seem to know that these very bright queens are defective in some way, for they accept them very reluctantly, and I have had them rejected one after the other, though darker queens from the same hatch, and the same mother, were accepted at once

Whether the brightness of these "fancy" bees is a form of albinism, and the lack of pigmentation an indication of low vitality, I leave it to the scientists in the craft to determine.

Harking back to the matter of queenless stocks in spring. If a stock has been queenless all winter, it may be found that a queen given in spring may breed only drones. This is due to no defect of the queen, but to the absence of any but very old bees, who cannot provide the queen with the special food she requires for successful brood production. The trouble may be remedied by giving a comb from another stock with hatching worker brood.—HUGH HOUSTON, Sidcup, Kent.

Jottings from Ashdown Forest.

The winter is gone, and bees and bee-keepers need to be up and doing. Examination of stocks reveals different states. Some have yet a good bit of sealed store, are strong, pert and breeding well; others are depleted in numbers; some, where not fed, though supposed to have plenty, have either succumbed, or very near it. Apparently some help must be given yet awhile to make sure. Doubtless many, if shortly tranferred to clean hives and fed, will give a good account of themselves. Dysentery is always more or less in evidence at this time of year. "I.O.W." disease but little in evidence.

Sections being so costly, the large number left in racks from last year, probably most bee-keepers will "shove 'em on and chance it." But I think the chance will be poor, unless we get a very favourable season, in which case the bee-keeper would think what a pity the sections were not new and clean.

The B.B.J. of late has many contributions of an interesting nature. Page 70, A. G. Gambril's contribution, bringing in notable names, was not compiled in five minutes,

being amusing and instructive; "a little nonsense now and then is relished by the wisest men."

I was somewhat surprised to read the notes about testing run honey by turning the bottle upside down. For myself, that is a thing I would always do, and consider it the easiest and best test of the ripeness and density of the honey. If the bubble simply rushes up, poor, thin stuff; if it goes up slow and gracefully, with a balloon-like appearance, the spear at the bottom being very noticeable, it is fine. Bottles that leak have no business at a show, or, in fact, to be used at all for honey. Honey should be enclosed leak-proof, therefore airtight jars. [And if the jar was filled up to the brim, as we have often seen done, even with "poor, thin stuff," there would be no "bubble" at all, as there is no air enclosed to form one, and, according to this test, the honey would be very thick.—EDS.]

Re "Ayrshire's" contribution, "Packing Bees and Ventilation," p. 107. I have known what the annoyance of suffocated bees is many times, but only twice since I saw an article on the subject in "Bees" in November, 1902, since which date I have always packed dark and airtight. The two losses were new swarms, in new skeps; certainly not quite airtight. Last year I sent 30 or more stocks long journeys by rail, all shut in dark and airtight. Every one reported highly satisfactory. Most were sent to advertisers in B.B.J. One sent his own well-ventilated travelling boxes. I had only to look inside of some to see what messes there had been. So I put waxed calico and plenty of paper over frames before screwing the ventilated lids down. In place of perforated entrance cover I tightly fixed a piece of wood. I still have the issue of "Bees" referred to; in fact, the whole issue less one number. [We have never seen any number of bees that were packed in an *airtight* box survive much longer than an hour; but have never known a mishap when there was plenty of ventilation.—EDS.]

J. W. Ross, p. 106, "Bee-keeping in Rhodesia," a very interesting contribution. It does all read nice—his getting bees and appliances; 2s. 6d. a section for his honey—till one considers the vicious nature of the bees, and his "hope" of the withdrawing of laws prohibiting the importation of queens, wax, etc. I sometimes wonder do they export some of their queens, and is that where some that I have made the acquaintance of come from—persistent swarmers, vile tempered, and no business to be within a mile of any civilisation.

Swarming time will soon be here, with all its annoyances to those that don't want swarms. It is generally considered to be from the want of room given in advance, but for some years my experience seems to go to disproving that theory. As a naturalist, as in many other things, there is far more that I don't know than there is that I do know. I do know plenty of space, supplied with comb foundation, won't prevent swarming; neither will plenty of combs supplied *always* stop the swarming inclination. Picking out queen cells (a very tedious job) is very little good, being next to impossible to be sure all have been picked out, and one may as well leave the lot as one. Also, the bees quickly start more, and simply won't build new comb and store honey; though, generally, if queen has access to, say, a couple of shallow frame racks, and the manipulator takes away the greater part or all of the shallows, with brood and bees on them (but not the queen), to help another weaker lot, and puts in frames with empty comb, in a couple of weeks it may be combs full of honey, or it may be again brood to remove. By so doing, if there is honey, it should be got; if no other hive needs help the shallows may be set aside to rear a queen, and after she starts laying (but not before) add another rack, with brood, also a rack of sections. Cover up secure and they can carry on with the honey-getting business.

Now for a theory of mine *re* the cause of swarming, which I hope will bring thorough discussion. The loss of queen causes some kind of *worry* to the bees, resulting in the production (I don't know how or where from) of what we know as "royal jelly." Nature induces the bees to build hanging-down receptacles for it, probably round an egg; the eggs develop into young queens. The first to emerge by instinct desires to destroy all others. She still not being fertilised, the bees will not let her destroy their instinctive hope by destroying the others. In disgust she bolts, with as many as care to follow, gets mated, but will not return to the hive where she knows there are rivals, no matter how much room or how few attendants with her. Apparently there is something that produces the same state of worry, with results similar to above, while the queen is still well and thriving, the end of which is she bolts in disgust, the large following constituting the first swarm. Others follow when the young queen emerges, and maybe more in succession, till finally there are very few bees left.—A. J. RIDLEY, Horney Common, Uckfield, Sussex. March 15, 1922.

North Hampshire Notes.

Extract from the *Cottager's Monthly Visitor* for July, 1840.

Third Letter to Bee-keepers.

"My Dear Friends,—In this letter I am going to tell you how it is that by means of a double hive you can get *better* honey and *more* of it than in the common hives.

Why the Honey is Better.

"In hives of the common sort the bees have only one place to live in, and use the same combs both for breeding the young and storing the honey. A common hive is a house with only one room in it, so the bees are forced to have their *nursery* and *store house*, and all in the same room. The queen bee lays her eggs in the cells, and when the young bees are hatched and come out the same cells are afterwards filled with honey. The consequence of this is, that the honey is not quite pure, and gets a bad taste, for there is a substance called *bee bread*, which

is what the bees use for feeding the young "brood"; it is of a dark yellow or brown colour, and has an unpleasant taste. There is always a good deal of this in every hive, and when the combs are cut up into small pieces and all put into a bag to *run* the honey out, this bee bread mixes with the honey and spoils the flavour of it. You know the finest honey is of a beautiful, bright yellow colour, like gold or amber, and quite clear and transparent; but if the bee-bread gets mixed with it the colour becomes darker, and the honey loses its transparency and delicate flavour. Besides, the combs in that part of the hive where the bees always live get foul and discoloured with the breath and heat of the bees; and this also helps to spoil the honey.

"The best honey is what is called *virgin honey;* that is, honey in combs which have never been used for breeding, and are new and clean. You may often get one or two combs of virgin honey out of a common hive, but they are chiefly the combs at the side of the hive, which are small and do not hold much.

"Now by means of the double hive you can get a whole hive of virgin honey. The queen bee lays her eggs mostly in the lower hive, and seldom if ever goes up into the other, especially if the upper one is kept rather cool by letting in a little air at the bottom, so the lower hive is kept for the *nursery* and the *storehouse* is on the upper floor over it. Then the upper hive contains no bee-bread, no young brood and no dark, discoloured comb. It is filled with beautiful white comb and pure virgin honey; and this honey, sold in the combs just as it comes fresh from the hive, will fetch half as much again as the honey out of the common hives. And besides this, when the honey is taken by smoking the bees the smoke and the brimstone spoil the taste of it, whereas by taking it in the way I described in the last letter, in the top hive, you want neither brimstone nor smoke, and the honey is obtained fresh and sweet just as the bees left it.

You Will Get More Honey.

"Because in a double hive you have a larger number of bees employed in making honey. In every hive a certain number of bees are wanted for *nurses;* their business is to feed and attend upon the young brood till they are hatched. About half the bees in a common hive are supposed to be thus employed, while the other half build the combs and fetch honey. Now as the queen lays only a certain number of eggs, there is only the same number of nurses wanted in a large hive as in a small one. A hive containing thirty thousand bees will have no more nurses than a hive containing twenty thousand. Say that ten thousand are busied in nursing, then in a hive of twenty thousand bees there will be ten thousand left to make honey; but in a hive of thirty thousand there will be twenty thousand making honey, so that by keeping the swarm at home in a double hive instead of letting them go seek another dwelling, you have probably twice as many bees making honey as you would if you let them go out. After a little while it is as easy to have ten double hives as the single ones, and ten double hives will give you more honey than ten single ones to keep for yourself, besides what you leave for the bees to live upon in winter; and as the honey is worth so much more, your profit upon the whole will be much greater.

"A gentleman who kept bees in this manner tells us, in a book which he wrote about it, that one summer he got 38 lbs. of fine honey from a top hive which had been put on only thirty days before. Who knows but that you may do the same? Only I should think that was a very fine season, and we cannot expect to have such seasons very often.

"Your sincere friend,

"A BEE-KEEPER.'"

Forwarded by W. B. Corbett, Hurstbourne Tarrant, North Hampshire.

Sunday Bee-Keeping.

I hope Mr. Hemming and other reverend bee-keepers do not consider it a breach of the Lord's Day. Somehow one feels bee-keeping on Sunday is, as it were, a separate department, and if one attends a place of worship in the forenoon, surely the afternoon could hardly be better spent than in studying the mysteries of one of the Creator's most wondrous works? Anyhow, when the voice of B——, the village carpenter, broke in upon my after-lunch siesta with "What about going up to see Mr. L——'s bees, sir?" one could not but comply with alacrity. In a few minutes our bicycles brought us to the door of Mr. L——, whom we started last season with one stock. He has a fine young fruit orchard, and we convinced him that bees must be an indispensable accessory to his fruit production. Soon we were deep in the recesses of as fine a stock of Italians as one could wish to see, with every comb of the ten crowded with brood. 'Tis obviously a case for more room. Mr. L—— has no spare hive, and, in fact, is parlous short of "spares." So back we go for a spare body box, alias second brood chamber, and hastily furnishing it with ten bars of foundation and drawn-out comb, return and soon ease the congestion in Mr. L——'s hive. He must knock up an extra lift, though, in which to accommodate his racks of sections or shallow frames. Then, after a brief glance through his second stock, a recently-purchased swarm, we leave Mr. L—— comforted and assured of a good return from No. 1 stock at all events.

"What about looking to see if those two queenless stocks of yours, sir, to which we gave queen cells last Sunday, have young queens or not?" says B——. "Right you are, B——," says I, and soon we are among our own bees.

Now, I have had two queenless stocks in "Brownie" (a creosoted hive), and in No. 9 hive, both queens having become spent through age and one having taken to the pernicious habit of laying nothing but drone eggs. Soon both stocks have been inspected, and, joy of joys, in both we find a fine young queen. A glance at one or two other stocks to satisfy ourselves that we have not been premature in putting on a second brood

chamber. We then fell to discussing how to entrap a wild stock which we have located in a hollow oak on the edge of the salt marsh which borders Southampton Waters' southern bank. B—— regards this stock as his private property, though I had seen it weeks before he even heard of it! We decide on a plan of campaign and then part.

Towards evening I pass through the village and am hailed by Mr. C—— from his garden. "Just the man I want to see, sir. There's a two-gallon swarm of bees at the end of my lane on the end of hedge nearest the marsh. I've just come up by it! 'Tis from the hollow oak, for certain." For a moment I stand irresolute. Shall I quietly annex this swarm—my apiary suffered grievous losses during the winter—or shall I go for B—— and help him hive the swarm from "his" oak? There is Evensong, too!

The better the day, the better the deed: besides, it *is* more blessed to give than to receive. So off we go for B——, and out he tumbles, leaving his tea untasted, skep in hand, and soon we stand beneath the hollow oak, with the azure belt of water and the leviathan liners beyond it, and the swarm hanging in the hedge a few yards distant. To take it in B——'s skep is the work of a few seconds, though a doubt crosses the minds of both of us whether it has issued from the hollow oak or not. For have not some of the workers obvious yellow bands on their little bodies, and is not the stock in the old tree of the dusky, ancient British line? Never mind, it is B——'s stock, and I can thus requite him for many a good turn done out of sheer cameraderie and love of bees, mine as well as his. Again we part, and B—— returns home to his tea rejoicing, with his precious skep-load.

A faint regret still lingers, however, that B—— is rejoicing and I am not. I suppose 'tis but human nature!

Monday is a day of toil, and in the afternoon we hoe our Hubam clover patch and perspire freely. Suddenly the cheery, well-known voice of D—— breaks in upon us: "There's five pounds a-waiting for you to pick up just over the fence, sir." "What, a swarm?" "Yes, I've a just passed un, sir." Off we rush, through and beyond our bee-garden, and there it is on the ground among some suckers from the bole of an old elm, a dense mass of our little Italian goldens. But surely we had removed all queen cells from the parent stock last Sunday week? But there they are, proving that we must have overlooked a cell somehow.

With the aid of a pair of shears we shake the swarm, twig by twig, into the skep, and soon are bending over the hiving board watching the little beauties run up into the hive which our youngest son made for us last term at school. There goes the queen, right enough! But she's a virgin, and so a prime swarm is not headed by the old queen in this case. In ten minutes they are all hived and we breathe a prayer of thanksgiving. We can now rejoice with B——. Had we annexed that swarm yesterday from the old oak would D—— have spotted our swarm to-day over the fence? We wonder. Truly the ways of Providence are inscrutable.—H. W. KETTLEWELL (Lieut.-Col.).

John Geddy, of Hilltown, Falkland.

By LIEUT.-COL. H. J. O. WALKER.

The chief materials for this account of Gedde—by which name he is better known—were a Memoir of John Geddy by Robert Mylne, Junior, in the "Miscellany of the Abbotsford Club," Vol. I., pp. 327, 351, Edinburgh, 1837, and the four Editions of Gedde's Treatise that appeared in 1675, 1676, 1677, 1697 respectively. Robert Mylne, Junior, was the son of the well-known Scottish antiquary of that name, kinsman of Gedde. The original M.S. is in the possession of the Society of Antiquaries, Edinburgh

The titles and descriptions of the editions are as follows:—

A / New Discovery / of / An Excellent Method / of / Bee-houses and Colonies, / to free / The owners from the great charge and / trouble that attend the Swarming of / Bees, and delivers the Bees from the / evil reward of Ruine for the benefit / they brought their Masters: advan- / taging their Owners many-fold above / what-ever any Method heretofore praictc'd doth. / Experienced seven years by *John Gedde.* / Gent. Inventor: and approved by the / Royal Society at *Gresham Colledge.*

London, Printed for the Author, and sold / by *D. Newman* at the *Kings Armes* in / the *Poultrey;* and *Ship and Anchor* at / the *Bridg-foot* on *Southwark*-side, 1675. 511. 30 pp. 6¾ x 4 inches uncut. Collation, A to C 4 in eights, A.1 blank; A.2 Title, with Advt. of Letters Patent verso; A.3—A.5 Introduction: A.6—C.4 (pp. 1-30) the Work. Opposite p 12 folding pl. of Boxes with frame-work for combs, tiered colony, and bee house.

2. "The Second Edition, enlarged, with several objections answered." Title very nearly as 1st: London, Printed for the Author and sold by several Book-sellers, in the City and Country, 1676. 63 pp. numbered from p. 9; nearly same size as 1st Edn., but re-written and fresh plate.

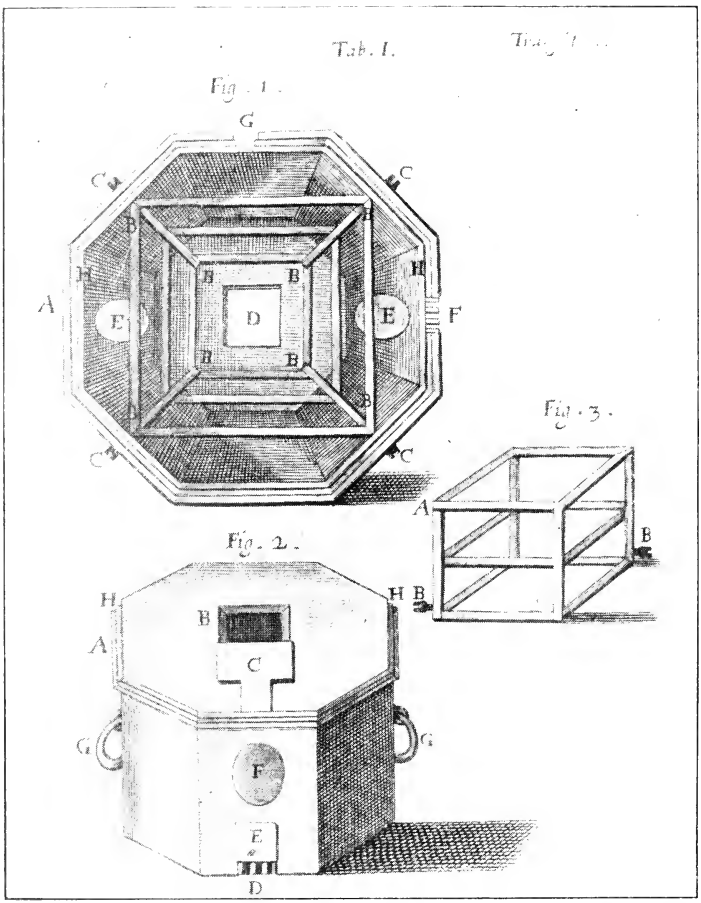
3. "The Third Edition, enlarged, with several objections answered." Title as 2nd London, Printed for the Author, and sold by several book-sellers in the City and Country, 1677, 77 pp., numbered from p. 10. Same size, plate, type—arrangement, and pagination as 2nd Edn., with added "Post-script," pp. 65-77.

4. A Further Experimental Discovery of Bees and *Their Usefulness.* With an Excellent Method for the better Ordering and Improvement of them for their Conveniency and Safety and the Owners' Profit; by way of Bee-houses, Boxes and Colonies. Experienc'd thirty years by *John Gedde.* Gent. Inventor: and approved by *King Charles,* and the Royal Society at *Gresham College.* The Third Edition, enlarged; with several Objections answered and further Helps given: and Wholsom Advices for the Countries Profit, and the Bees better Maintenance by Planting. *London,* printed for the Author, and are to be had at Rich.

Swalden's, a Joiner, upon Snow-Hill, near *St. Sepulchers* Church, 1697. 711, 51 pp., 211; 6¼ x 3¾ inches; 2 pl. Exact size of title page of the Copy in the Library of the Societa d'Apicoltura at Milan, the only one known to me, is 15.5 x 9.5 cent. as bound.

Collation :—A.1—E.2 in eights. A.1 Title, verso blank; A.2—A.5 "Advertisement," and "To the Reader"; A, repeated ——A.2 (inserted) "An Introduction" (signed Richard Swalden); Plate of 3-tier Colony, similar to Rusden's plate, but "Richard Swalden delin. Pro. Authore, John Gedde"; facing this a pl. of tile-roofed Bee-house like a chapel; A.6—D.7 verso blank (pp. 1—51) the Work; D.8 missing, probably blank; E.2 "An Appendix concerning the great Vertues and Physical use, of an Excellent Chymical Oil, extracted only from Bees-wax. By Abraham Chesworth, of London, Chymist."

5. The *English* Apiary: or the Compleat Bee-Master. Unfolding the Whole Art and Mystery of the Management of Bees. Being A *Collection* and *Improvement* of what has been Written by All Authors, relating to this subject, as well Antient as Modern. With a *New Discovery* of an Excellent Method for Making *Bee-Houses and Colonies*, To Free the Owners from the Great Charge and Trouble that attends the *Swarming* of Bees and is much more Advantageous than any Method hitherto Practised. By John Gedde, Esq.; *Approved by the* Royal



Society, London. Printed for *E. Curll*, *W. Mears*, and *T. Corbet* in the *Strand*, 1721. Price bound, 2s. 121l, 106 pp. (wrongly numbered 108), 6½ x 3½, 1 folding pl. Separate title (p.85) "A New Discovery . . . . London: Printed in the Year 1675. And reprinted in 1722." This book contains all the matter of the 1775 edition, though not in its original order, together with additions from various sources, principally Purchas' "Political Theatre of Flying Insects."

6. An anonymous German translation of the 1721 edition, entitled "Apiarium Anglicum," oder: Der vollkommene Bienen-Meister . . . . herausgeben von Johann Gedde, Esq., Leipzig. J. F. Braun's sel. Erbe, 1727. 2nd edition, 1729; 4th edition, 1752; 5th, 1755.

John Gedde, or, more correctly, Geddy, the second son of Michael Geddy and Catherine Avery, was born in 163—, at St. Andrews, in Fifeshire, where his father was Baillie. From 1647 to 1653 he served as an apprentice to Mr. Henderson, Writer to the Signet, and in 1650-51, when King Charles II. was in Scotland, he acted as Clerk to the Committee of War, principally in Falkland, where the King was, "by which he gained a deal of money." Continuing to prosper, he became stewart-clerk to the Stewart of Fife, John, Earl of Athol, entered with success into various financial transactions, and in 1665 purchased certain lands at Falkland. He married in 1657 Ann, daughter of Mr. Wm. Wallace, schoolmaster at Air. Thus, although Gedde has been invariably termed an Englishman by both English and foreign writers on the subject of bees, he was a thorough Scot.

It was in 1668, Gedde tells us, that he "fell upon the new experiment and improving of bees," being "provoked to it" by observing the incredible quantity of honey stored by wilding colonies in the old oak trees of His Majesty's Park of Falkland. The hive thus invented was shown to various friends, and amongst them, to Sir William Thomson, who sent an account of it (with the illustration here reproduced) to the Secretary of the Royal Society in London. This "Description of a Bee-house, useful for preventing the swarming of Bees, used in Scotland with good success," was published with some commendation in No. 96 of the Royal Society's Philosophical Transactions on July 21, 1673, and a hive sent by Sir William was placed on view at Gresham College, their usual meeting place. On this encouragement Gedde went to London in 1675, and as John Gedde, Esq., published his famous treatise, at the same time obtaining for his invention the Royal Patent for a period of 14 years. The interest of His Majesty, special patron of the Royal Society, was aroused, and, "having seen the same practised and proved, he caused one [apiary] to be erected at Spring Garden, near Whitehall, and another at Windsor, where for several years His Majesty did come to the places himself, and with delight beheld them, and saw the honey in its season taken forth without troubling the bees, to his great satisfaction, and willed and commanded another to be erected in his Ancient Kingdom of Scotland, in His Majesty's Park of Falkland, for the good and benefit of his whole subjects, rich and poor, therein, in order to stir up noblemen and gentlemen to follow his example . . . . and did give and grant to the said John Geddy 20 aikers of marish ground [moorland] in the east end of the said Park . . . to be enclosed, trenched and planted with such herbs, trees and others as is most suitable . . . . for maintenance and food of an apefacture, and ordered a convenient house to be built therein for that purpose, and did ordain the treasurer and receivers of His Majesty's revenue to advance and pay to the said John Gedde the sum of 200 pounds sterling for building and accomplishing the said apefacture."

After the issue of his second edition, and before the appearance of the third, Gedde "travelled through several counties in England," pushing his invention. His partners were Samuell Vowell, Gentleman, William Galt, Thos. Douglas, and Thomas Blond, the latter gentleman dividing the counties with Gedde. Mr. John Rouse, Merchant of London, was agent for Middlesex and five neighbouring counties.

In 1679, Moses Rusden, an apothecary, Bee-Master to the King's most excellent Majesty, published "A Further Discovery of Bees," in which Gedde's hive, improved, according to the pretension of the author, is adopted as the best.

(*To be continued.*)

Carmarthenshire Bee-Keepers' Association.

ANNUAL MEETING.

The annual meeting of this Association was held at the Shire Hall, Carmarthen, on April 29, at 3 p.m.

The ordinary business of the meeting was preceded by a lecture on "International Bee-keeping, Queen Introduction and Increase," by Dr. A. Z. Abushâdy (Editor of the "Bee World"). The lecture was most instructive, and was closely followed throughout. The lecturer showed how all bee-keepers benefited by the introduction of new appliances and ideas in any country, and that our knowledge of queen introduction had been enriched by bee-men of many nationalities. In describing the different methods of queen introduction, two different points of view were clearly distinguished: (a) That of the commercial bee-keeper, busy with many hives, who can, and in fact often has to, take risks: (b) that of the small bee-keeper, who can afford to make no needless mistake, and who has time to take extra care. Great stress was also laid on the fact that both queen and bees must be considered separately; first, things appertaining to the queen, such as nervousness and colony odour; second, the attitude and temper of the colony to which she is to be introduced. This last is most frequently overlooked, and is often the source of disaster. The bee-keeper may have both bees and queen in the right frame of mind, and then, by adopting one of the methods necessitating the opening of the

hive, disturb them at the most critical time. Many practical points of interest were dealt with, such as opening a travelling cage to secure the queen, first dipping the whole in tepid water to prevent flight; too dry candy in travelling cage; introduction of two queens in one hive at the same time and afterwards distributing them to two different stocks. The lecturer exhibited the several appliances dealt with, pointed out their peculiar advantages, and often also their disadvantages. The great lesson of the lecture was that no bee-keeper should neglect to improve his bees (by introducing new queens of better strain) through fear of loss of queens, for perfectly safe methods of introduction are now possible.

After a hearty vote of thanks had been given to Dr. Abushâdy for his address, the ordinary business of the meeting was commenced. The report and balance-sheet, being considered satisfactory, were adopted, and the retiring officers were re-elected. During the year no less than 25 lantern lectures have been delivered, and six demonstrations at horticultural shows have been given.

It was decided that the Council should be asked to consider the question of circulating bee literature monthly among members, and also that the following resolution be forwarded to the Council of the British Bee-keepers' Association :—"That this annual meeting requests the Council of the B.B.K.A. to make such alterations in the constitution (if necessary) as would allow County Associations to vote by proxy on important matters, and so avoid the expense of sending delegates to London from distant centres."

W. COMERY, Hon. Sec.

Surrey Bee-Keepers' Association.

ANNUAL MEETING.

The annual general meeting of the Association was held on Saturday, April 8, at Stanley's, Lavender Hill, S.W., A. Seth-Smith, Esq., of Cobham, in the chair.

The report and balance-sheet were approved of.

Mention was also made of the fact that all those who paid their subscriptions by March 31 were having their expert visits free of charge, this being included in the small subscription of 5s., they also having the other benefits given by the Association.

Mention was also made of the fact that the number of members at the present time is now over 600.

Messrs. A. Seth-Smith, W. Fawcett, and W. F. Reid were elected on the Council to act with the divisional representatives. Miss D. Y. Knowles and Mr. A. Richards were elected as consulting experts. Messrs. E. G. Waldock and W. E. Hamlin were elected to represent the Association at the B.B.K.A. meetings, and Mr. W. E. Hamlin was elected hon. secretary and treasurer. Mr. A. T. Hedger was elected hon. auditor for the year. Votes of thanks were accorded to the Surrey County Council and Ministry of Agriculture for the free lectures and demonstrations, and to the retiring Executive Council. Mr. Seth-Smith, before a reply by Alderman Patrick, mentioned that the whole time he had occupied the chair, which was from the start of this new Association in 1895, there had been no disagreement or discord.

A most interesting and instructive lecture, illustrated with lantern slides, was given by Mr. Arnold Richards on "The Anatomy of the Honey Bee," the lanternist being Mr. Wenban, of Wimbledon, after which the members were generously entertained to tea by Mr. Seth-Smith.

Two lots of 100 labels each were balloted for. One lot was secured by Miss Collard, the youngest member present, and the other lot by the hon. secretary.—(*Communicated.*)

Middlesex Bee-Keepers' Association.

GARDEN MEETING AT ENFIELD.

Bee-keepers in the Enfield district are exceedingly fortunate in having such an enterprising and energetic local secretary as Mrs. Hodson, of Harley Lodge, Private Road. On Saturday afternoon, May 13, Mrs. Hodson arranged an open-air meeting in her garden, which was attended by more than fifty bee-keepers of the neighbourhood. The day was fine, and the garden, with its fruit trees in full blossom, presented a gay appearance, which was naturally in harmony with matters pertaining to apiculture. A large observatory hive which was on view proved an object of great interest. At four o'clock the proceedings began by a lecture from Mr. W. Herrod-Hempsall. The lecturer allowed his audience to select subjects on which he was to speak, and the subjects chosen were "How to Obtain Large Yields of Honey" and "How to Prevent Swarming." At the conclusion of the lecture tea was served, and after a short interval Mr. Herrod-Hempsall gave a demonstration, showing his audience how a hive of bees should be manipulated. Hearty votes of thanks were accorded, first to the lecturer for the able way in which he had handled his subject, and then to Mrs. Hodson for her kindness and hospitality, which enabled her visitors to spend such an enjoyable afternoon. A gratifying result of the meeting was that the names of several new members were added to the list of the Association.

J. B.

Medway and Counties Bee-Keepers' Association.

The newly-formed Medway and Counties' Bee-keepers' Association are to be heartily congratulated upon the success attending their first summer venture on Saturday afternoon, May 20. The weather was perfect, and large numbers of amateur apiarists and their friends found themselves at that delightful little spot, Upchurch. No better rendezvous could possibly have been found than Mr. Wakeley's orchards, just now a mass of blossom. In fact, the whole of the Kentish countryside is at its best. At Upchurch we have still the ozone-laden breezes taking their free course from the sea,

whilst the foliage of umbrageous trees keeps one cool upon the hottest day.

Folk from the Medway towns and outlying districts arrived by motor, cycle, or on foot, after having trained or trammed to Rainham. Mr. George Bryden, the pioneer of the new organisation, was busy, as usual, and with his car made several journeys to and from the tram terminus, conveying visitors over the 2½ miles of road dividing Rainham from Upchurch. Meanwhile the Ladies' Social Committee, headed by Mrs. and Miss Bryden, Mrs. Semper and Mrs. King, were busily engaged with the necessary preliminary commissariat arrangements. There was also a bountiful supply of free literature.

Amongst those present were:—Capt. A. Leach (Walderslade), who presided; Messrs. E. Semper, F. J. Merchant, A. Potter, C. H. Langley (Gillingham), A. G. Boreham, S. W. Oliver, H. E. Smith, A. R. Castle (Rochester), W. R. Reader, J. W. Holloway, H. D. Manser, L. Still, and D. Manser (Upchurch), J. Nimmo, C. H. Clark (Higham), T. Nordbye, C. Masson (Strood), R. Miller, R. H. Miller (Walderslade), C. E. Gowar and A. Gowar (Gravesend), J. F. Handry, J. Marchant, and other ex-Service men from Preston Hall Training Colony (Aylesford), E. Mobbs (Sittingbourne), and others, in addition to many ladies.

Capt. Leach acted as chairman, and in opening the proceedings said that they had met in a beautiful bit of country and in ideal weather.

Mr. J. W. Holloway then, on behalf of Messrs. Wakeley Bros., extended a hearty welcome to the visitors. This was the third time that bee-keepers had visited the apiary there for practical demonstrations. He believed that they had learnt a good deal. Messrs. Wakeley were always pleased to welcome them and the apiary was always at their disposal.

Mr. E. Semper (Gillingham Park) was then called upon to give his promised lecture on "Fertilisation or Pollination of Fruits." After defining a fruit, he said the two great agents of pollination were wind and insects. Wind-pollinated flowers exhibited a variety of special characteristics: (1) They were provided with an abundance of dusty pollen; (2) the absence of honey; (3) small greenish scentless flowers; (4) hairy or feathery stigmas offering a large surface to the wind; (5) long pendulous inflorescences, so that the escaping pollen was readily wafted away. Good examples of wind-pollinated flowers were the hazels, poplars, and grasses. The stigmas of these flowers were very small and inconspicuous, and Nature seemed to have provided an abundance of pollen, so that when the pollen was distributed by the wind they had a better chance of becoming pollinated.

The flowers which were pollinated largely by insects—and by insects he meant their friend, the honey bee, particularly—had quite different characteristics to the wind-pollinated flowers. They had usually a large conspicuous coloured flower, and frequently gave off scent. Nectaries were commonly present, secreted the nectar, and in that way attracted insect visitors. The pollen grains of this class of flower were of a much larger and heavier type and were either viscid or sticky or covered with spiny outgrowths or irregularities, and in this way adhered to the hairs on some part of the insect. It should be borne in mind that the insects are quite unaware of the importance which their visits have to the plant, neither were they inspired with any particular sentiment towards the flowers which they visited. The flower required a certain service performed, and in return for that was prepared to make a sacrifice of a certain proportion of its nutriment, in order to provide the honey and pollen, which served as food for the insect visitor.

A great many factors were at work affecting pollination. Many flowers would not pollinate themselves, because the stigma was often receptive before the stamens in the flower burst and set free the pollen grains. Or, it might be, that the pollen grains were set free before the stigma was ready to receive them. That was the cause of what was known as a poor set of bloom. It could be remedied by pollen being carried from flowers which had pollen grains ready for distribution to flowers which had stigmas ready to receive them. This was chiefly carried out by their friend, the honey bee. Their colonies of honey bees far outnumbered the wild bees, who did not help in this way because their colonies were not established so early in the season.

Mr. Semper then proceeded to touch upon some experiments which were carried out a few years ago in the County of Kent—and some at Bloor's Farm, in the district of Rainham—by Mr. Berry, Horticultural Inspector to the Board of Apiculture. Mr. Berry inspected and carried out a good many experiments in the cherry orchards, and amongst the growers he found a great inclination to plant whole drifts of Amber or Kentish Bigarreau, one of the most extensively-planted and profitable cherries grown. This cherry usually bore heavy crops when mixed with a surrounding of other varieties. All varieties in bloom with it appeared to pollinate it. When the Amber Bigarreau was completely isolated, however, it soon showed its sterility, and would not fertilise with its own pollen. One notable case was at Rainham and another at Sittingbourne. Here several acres of Waterloos had never borne a full crop, although the trees were in the best of health, and had bloomed profusely for a number of years. Crosses were made by bringing pollen of Amber Bigarreau and fertilising trusses of bloom on the Waterloos. The experiment was entirely successful, and every fertilised bloom set fruit. This went to prove the value of the honey bee and how useful cross-pollination was, owing to some fruits being unable to fertilise themselves. It was estimated that 83 per cent. of the blooms of our fruit crops were fertilised by the honey bee. Not only had cross-pollination a good effect on the quantity of fruit produced, but the influence of the pollen affected its char-

acter and quality. It was found that trees which were cross-pollinated produced larger and better-flavoured fruit, as well as more perfect seeds. This was most important, for if the seeds were not perfect, the fruit was deformed. Owing to some varieties being self-sterile, it was a good plan, when large drifts were planted, to plant every fourth row with another variety as a polleniser, and in selecting pollenisers it was advisable to have varieties blooming about the same time, the pollen of which will give larger and better fruit.

This cross-pollination was entirely dependent upon insects, which transported the pollen from one tree to another. It had been proved that in the spring, when fruit trees were in bloom, the honey bee far exceeded, in numbers, any other kind, owing to its being protected in the hive during the winter. This bee was ready for work as soon as the weather was fine, and the first blossom opened, whilst in the case of wild bees, the whole of the colonies died in the autumn, except the queens, which hibernated and did not establish themselves until late in the season. They were, therefore, of little use in fertilising fruit, because they were not in large enough numbers until late in the season, when the blooming season was long over.

The lecturer then dealt with experiments in connection with smaller fruits—red and black currants and gooseberries—which had been made at the Armstrong College, Newcastle-on-Tyne, and also with the practice of covering pear and apple trees with muslin. The result seemed to prove that the exclusion of a certain amount of air and sunshine by the muslin in no way affected the setting of the fruit In other districts the results were decisive in favour of bees as agents for pollen distribution. It was noticed that trees and bushes rarely carried satisfactory crops of fruit, and this was attributed to an insufficient supply of bees. The nearest hives were about half-a-mile to the east, and as the prevailing winds were from the west, it seemed likely that the bees when leaving their hives would fly east for shelter. Mr. Avery (expert to the Cumberland Bee-keepers' Association) placed two hives of Italian bees in the orchard and kept them under observation. He found that the percentage of bees other than Italians which visited the trees was very small, and on some occasions hundreds of Italians were at work when not another variety of insect could be seen.

In conclusion, Mr. Semper showed that we were also greatly indebted to insects for our vegetable products.

Questions were invited, and quite a number were "fired" at Mr. Semper, Mr. Bryden being prominent as a poser-putter.

Asked what were the best pollen and nectar bearers, Mr. Semper replied clovers, limes, peas, beans, mignonette.

Someone asked whether borage were worth while cultivating for bees?

Mr. Bryden said that he had three weeks ago visited France, and on the apiaries of Mr. Wilson (the former Chairman of the Kent Northern Division) he had seen rows upon rows of furze and broom, 5 ft. to 6 ft. high, extending as far as the eye could see. It was planted on light sandy soil.

Mr. Semper replied that a great deal depended on the difference in the climatic conditions.

Other questions were put by Capt. Leach, Mr. Castle, and students from Preston Hall.

Now it was tea-time, and the ladies were busy handing round tea, sandwiches, cakes and pastries. There was an abundance of eatables, and the visitors were quite ready to replenish "the inner man," without being twice asked.

After tea there were practical demonstrations with four hives in the adjoining apiary. These hives were in different stages of advancement, and the bees were handled and subdued by Mr. Bryden in such a manner that later on the combs, full of bees, were handed round for inspection, and actually handled by some of the erstwhile timid ladies. Another interesting item was the hiving of a swarm by Mr. Castle (of Upchurch), who is in the employ of Mr. Wakeley.

Votes of thanks were accorded Mr. Wakeley and his bailiff (Mr. Bishop), on the motion of Mr. Bryden, seconded by Mr. Semper; and also Mr. Semper, on the motion of Capt. Leach, seconded by Mr. A. R. Castle. The ladies were also accorded a vote.

At the close a number of new members were enrolled.

It was also announced that similar demonstrations are to be given during the summer at (amongst other places) Borstal Institution, Preston Hall, Walderslade, the Packman Memorial (Rochester), Camer Park, Hill Farm (Higham), and the Corn Exchange (Rochester).—(*Communicated.*)

Notices to Correspondents

B. K. (Purley).—*Plants not suitable for bees.*—We take it you mean a list of plants which yield honey that is poisonous to human beings. "The A B C and X Y Z of Bee-keeping" says: "There are cases on record, apparently authenticated, which seem to show that honey gathered from plants that are in themselves poisonous, is also poisonous either to human beings or to the bees themselves," and quotes the case of some of the men in the Greek Army under Xenophon being poisoned by eating honey. We believe this is supposed to have been gathered from the rhododendron. There is a chapter on this subject with a short list of plants in "American Honey Plants" by F. C. Pellett. Cases of poisoning are, however, so rare as to be negligible. Some people are susceptible to poisoning by honey from any source, just as there are people who are unable to eat fish because of its effect on them. Among plants useful to bees are Ajuga Reptans (Common Bugle), Arabis (single), Borage, Cornflower, Wallflower (single), Christmas Rose, Limnanthes Douglasii, Mignonette, Acacia, Raspberry, Mustard, Snowberry, Sweet Violet, etc.

"Jess" (S.E.4).—*Keeping bees in a greenhouse.*—We are afraid that even with the windows out—this we take it means the glass in the side of the house—a greenhouse would be too warm, and

cause too much swarming. If you can overcome this by giving shade, the bees would probably do all right; it is the only drawback we can see.

F. P. (Thornton Heath).—*Effect of beet sugar on bees.*—(1) It is likely to give them dysentery, especially if used as a winter food. (2) It requires special apparatus and analytical skill to determine if sugar is beet or cane. A rough-and-ready test is to partly fill a bottle with a syrup of sugar and water, stand in a warm place for about 48 hours, keeping the bottle tightly corked. If the cork is removed at the end of that time pure cane sugar will have a sweet, wholesome smell; that of beet sugar will be foul.

MRS. E. L. (Salop).—*Bees deserting hive.*—It is not at all uncommon for a swarm to desert the hive. There would be a queen with them, or they would have returned to the parent hive when in your possession. Possibly there was something objectionable to them in the new hive. *Suspected Disease.*

E. J. W. (Somerset).—The trouble is sour brood. See "Guide Book," page 174.

Bee Shows to Come.

A nominal charge of 2s. 6d. is made for notices (not exceeding 7 lines) in this column, 10 lines charged 3s. 6d. up to 16 lines 5s., which covers cost of insertion from order till date of show. Cash should accompany orders for insertion.

June 7 and 8, at Chelmsford.—Essex B.K.A., in conjunction with the Essex Agricultural Society's Diamond Jubilee Show. Apis Club's Silver Medal, Essex Agricultural Society's Silver and Bronze Medals, and also the B.B.K.A. Medals and Certificate, besides many prizes All Classes Open. Lectures and Demonstrations on both days in the Bee Tent by the County Bee Instructor.—Schedules and Entry Forms from Secretary, Essex Bee-keepers' Association, Rawreth, Wickford, Essex. (Stamped, addressed envelope, please.)

Royal Show, Cambridge, July 4 to 8.—Over £40 in prizes. All classes open.—Schedules and all information from Mr. E. C. R. Holloway, Burwell, near Cambridge. **Entries closed.**

July 20 and 21.—Lincolnshire Bee-keepers' Association Show of Honey, Wax, Hives, Appliances, etc., at Skegness. Over £30 in prizes. Open and County Classes.—Schedules and Entry Forms from Major J. H. Hadfield, Alford, Lincs. **Entries close on June 19.**

July 22.—Wyke, Normandy and District Horticultural Society's Annual Show. Honey: 5 Classes (Sections and Extracted), Open; Honey: 4 Classes (Sections and Extracted), Local; 1 Class Wax. Open. The Surrey Bee-keepers' Association offers to duplicate all first prizes in open section (Class 86 excepted).—For further particulars and Schedules apply to Hon. Sec., F. G. Kennard, Pirbright Road, Normandy.

July 22, at Mill Hill, N.W.—In connection with the Flower, Fruit and Vegetable Show, under the auspices of Hale and District Allotment Association. Classes for honey and wax exhibits for competition.—Schedules are ready, and may be obtained by sending stamped, addressed envelope to the Hon. Secretary, Mr. A. Bacon, Yew bank, Tennyson Road, Mill Hill, N.W.7. **Entries close July 15.**

July 26-27, at Cardiff, Sophia Gardens.—Glamorgan Bee-keepers Association, in connection with Cardiff and County Horticultural Society's Show. Open Classes. Special prizes: Taylor's W.B.C. Hive and Apis Club Bronze Medal.—Schedules from Secretary, Chas. F. Davies, 5, Borstal Avenue, Cardiff.

August 31, 1922.—Winchester Domestic Live Stock Association Show. Schedule of Honey Classes Open:—Class 5, one shallow frame; Class 6, six sections of 1922 honey; Class 7, six 1-lb. screw stoppered bottles of 1922 honey; Class 8, trophy of bee products to be arranged on table space 3 ft. by 3 ft.—Entry Forms to be obtained from M. W. Castle, 80, High Street, Winchester.

September 16 to 22.—British Bee-Keepers' Association Annual Show at Grocers' Exhibition, Royal Agricultural Hall, Islington, London.—Schedules from Hon. Secretary, B.B.K.A., 23, Bedford Street, Strand, London, W.C.2. **Entries close certain September 4.**

October 12, at Ongar, in connection with the Ongar and District Agricultural Association.—Extracted and Comb Honey. Open to Essex.—Schedules from G. A. Taylor, Hon. Sec., Ongar and District Bee-keepers' Association, Ashcroft, Ongar.

Special Prepaid Advertisements.

One Penny per Word.

PRIVATE ADVERTISEMENTS.

TWO clean Hives, W.B.C. principle, with lifts, 25s. 6d.; good 8-frame Stocks, £3 10s.; Hives, 17s. 6d.; cash with order; cases returnable.—W. WOODS, Normandy, near Guildford. f.2

ITALIAN HYBRIDS.—Two strong Stocks, 9 frames, wired, healthy, 1921 Queen, 60s. each; boxes returnable; two good 5-frame Nuclei, 30s. each.—H. BOWREY, Swallowfield, Reading. f.5

CAN BOOK a few orders for healthy swarms, Italians crossed with Simmins' White Star, splendid white cappers, 30s., with order; box returnable. — ANDERSON, 15, Hawes Road, Bromley, Kent. f.4

ITALIAN-CARNIOLAN HYBRID. — 8-frame Stock, in brood box, perfectly healthy, £3 15s. —1, Park Drive, Hampstead, N.W.11. Tel.: 8536, Hampstead. f.5

SURPLUS JUNE SWARMS, Italians, 7s. 6d. per lb., carriage paid. Prepaid orders booked. —OSBORN, Glenfield, Rideford. f.6

GRANULATED LIGHT HONEY.—Few 14-lb. tins, 14s. each, carriage paid.—D. BATEMAN, Bee-keeper, Eglwyswrw, Pembrokeshire. f.7

SWARMS, 25s. each, carriage paid.—DEAR, Funtington House, Chichester. f.8

WANTED, "Bee World," a set.—JOHN DAVIS, 13, Paternoster Row, London. f.9

5-SEATER (1914) FORD CAR, good running order, spare wheels, lamps, etc., £60, or exchange Bees.—PINDER, JUNR., Kirton-in-Lindsey, Lincs. f.10

SURPLUS.—Strong Stock Bees in bar frame hive, cheap.—CARTER, "Goldsands," Southminster. f.11

WANTED, good second-hand Geared Extractor, also Ripener.—BUTCHER, Glasbury, Breconshire. f.12

HONEY BOTTLES, tall, lowest prices, carriage paid; Labels, your name on, 250 for 2s. 6d. Order now.—H. BUNNEY, Dudley.

EIGHT STOCKS OF BEES on 6 and 8 frames, £3 and £2 4s.; carriage paid; one 3-lb. Swarm, 30s.; 10s. deposit on travelling box.—DRAPER, Yew Tree Villas, Park Gate, Swanwick, near Southampton. f.22

FOR SALE, two W.B.C. Hives with Stocks, Italian Hybrids; owner leaving neighbourhood; offers.—Call, 7, Ryde Vale Road, Balham, S.W. f.23

A FEW surplus 10-frame Stocks for Sale, 70s., carriage extra; carrier 10s., returnable.—ASHWORTH, Pound Street, Warminster. f.29

FOR SALE, three new Hives, painted white, complete with lifts, etc.; also Honey Extractor and other Apparatus.—Apply, DAVEY, 12, Heath Street, Stourbridge, Worc. f.31

For best bees, queens and appliances come to PEARSON & GALE, Marlborough.

FOR SALE, Twist Drills, 5/32 in. to 7/10 in., 10 different sizes, 22 drills in all, every one new, 7s. 6d. the lot; postage 9d. extra.—Box No. 71, B.B.J. Office, 23, Bedford Street, Strand, W.C.2. 1.24

SWARMS, June, 8s. lb., Dutch, guaranteed healthy (always buy by weight). Orders in rotation. Note extract from letter received: "Up to the time of the introduction of these Dutch bees our average yield per hive was not more than half of the record yield given by these Dutch bees."—WOOD, Colewood Apiary, New Road, Mitcham, Surrey. r.f.32

TWO HIVES (with frames), in good condition, Feeder, Smoker, carriage forward, for £3 the lot.—R. S. MIDGLEY, Vernon Lodge, Chatsworth Road, Totley Brook, near Sheffield. f.34

SWARMS, Italian, strong and healthy, 25s.; package returnable.—W. YOXALL, Oaken, Wolverhampton e.133

AM OPEN to buy healthy Stocks.—PRYOR, Breachwood Green, Hertfordshire. e.138

ITALIAN HYBRIDS, Simmins' strain, surplus Stocks on 5 combs, with young Queens, 35s. each, carriage paid; June delivery.—ERNEST GRIFFITHS, Helsby, Cheshire. r.e.128

CLEAN Second-hand surplus Bee Appliances, good, sound, well-made Combination Hives, Queen Excluders, etc.—DAVID HANCOX, Grove Lodge, Deddington, Oxford. r.e.130

FOR SALE, one 13-frame Stock, one 10-frame, and two Skeps of Italian Hybrids, healthy, and hives in splendid condition. Offers.—HOAD, Four Oaks, Beckley, Sussex. r.e.131

SWARMS, guaranteed healthy since apiary established in 1902, good workers, vigorous strain, 7s. lb.; rough weight from 4-6 lbs.; boxes returnable.—LANDIN, 101, New Road, Woodston, Peterboro'. e.134

FOR SALE, two 10-frame Stocks of Bees, Hybrids; no disease.—NOYES, Bangors Park, Iver, Bucks. e.156

STRONG 6-frame Stock of Banats, free from disease, £3 10s.; box 10s., returnable.—F. W. HARPER, 39, St. James' Road, Watford. e.157

BOOKING SWARMS from healthy English Bees.—H. SAUNDRY, Sennen, S.O., Cornwall. e.95

I HAVE still a few 8-frame Stocks Italian Bees for Sale at £3 15s. per stock, f.o.r.—DOBSON, Hunton Bridge, Herts. r.e.57

NATURAL healthy Dutch-Italian Swarms, 30s.; second, 25s.; cash with order; box returnable.—J. BOYES, Bee-keeper, Snainton, Yorks. r.e.59

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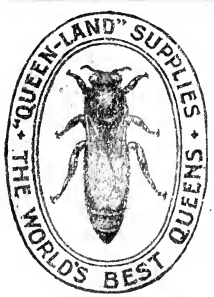

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The Bee-Keepers' Calendar.

JUNE, 1922

8 Thursday. " Yet how I envy you, a chartered rover
'Mid all the joys the countryside may yield.
'Tis literally yours to live in clover,
Garnering honey from the scented field."
"Touchstone," To a Bee " (*Daily Mail*).

9 Friday. " A wee slim creature with wonderful wings
Such daintily gauzy and delicate things—
Her story a tale for poets to tell,
Woven of words with magical spell."
Grace Allen," An Italian Queen " (*from Gleanings*).

10 Saturday. " Welcome ! dames of Italy :
Leave your bay and lemon grove
And vines of Tuscany.
Come our English sweets to prove.

" Here in your adoptive clime
Waits for you the jasmine star,
Clover, heather, stretching far,
Cowslip, clematis and thyme."
A. de B., " Italian Queens " (*Country Life*).

11 Sunday. " Now when the golden sun has put to rout
Winter, and chased him 'neath the earth, with light
Opening the summer sky, forthwith the bees
Range wood and glade, make boot upon gay flowers,
And lightly sip the surfaces of streams."
Virgil, Georgics, Book IV.

12 Monday. " A swarm of bees in June,
Is worth a silver spoon.
Just take your key and dustpan
And ' ting ' the swarm a tune !
Way down in the garden,
Gay with red Sweet Williams,
' Ting ' your bees a summer song
For well they love a tune ! "
E. S. F. (*B.B.J.*, 5. VII. 1917).

13 Tuesday. " In the honied haunt
Where the pollen clings,
There is dulcet chaunt
Of untiring wings."
Katherine Mann," June in a Paris Garden."

14 Wednesday. " Where the mowers mow the cleanest,
Where the hay lies thickest and greenest,
There to trace the homeward bee,
That's the way for Billy and me."
James Hogg," A Boy's Song."

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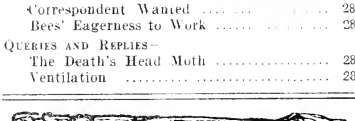

How Not to Handle Combs.

We thank several readers who have written respecting, or sent us an illustration which appeared in the *Daily Mail*. It depicts a bee-keeper, who certainly looks old enough to know better, examining a comb of bees, which, instead of being held in the correct position, is being held with the top bar next the body, and the frame and comb at a right angle, so that the bee-keeper is looking down on the comb. Mr. J. Lambert, a Yorkshire reader, says:—

"I expect hundreds of bee-keepers would see the enclosed cutting taken from the back page of the *Daily Mail*. A better illustration of 'how not to hold a frame' was never published. Imagine hundreds of cells with new honey in and the result, also danger of a smash out, and I expect the man calls himself a bee-keeper? He ought to be in a pram, yet, anyway, if I was ever called upon to examine anyone who held frames 'flat on' they would lose quite a few marks.

"Maybe you could point out in the 'B.J.' the folly of it; it is done very often by many who ought to know better."

It is a great pity that a paper with the circulation of the *Daily Mail*, which has always encouraged bee-keeping, does not take more care to have any matter it publishes absolutely correct. There are surely some bee-keepers on their large staff who could ensure correctness in print or illustration if the trouble was taken to ask their opinion and advice.

Jottings from Huntingdonshire

THE PASSING OF A GREAT SPLENDOUR.

Nature works her own way, and generally manages to hold us spell-bound in the end. In March and April she gave us occasional shivers, and tried our nerves with winds blowing east and north with the twinge of an iceberg. The whole countryside was held in check, and we fell to bemoaning the lateness of spring. Yet we hoped for balmier days, and our hope was not in vain. May has given us a springtime of unspeakable beauty. Did ever one see, yea more, did ever one imagine such a riot of colour and scent? It is passing now. Gone is the lilac with its perfumed beauty, going is the laburnum blossom covering branches with droplets of gold as if the very stars of Heaven had combined to enrich its beauty, going are the billowing masses of hawthorn bloom, of white, pink tinted, and pink. And what a sight! On yonder hill slope there it shimmered, mile upon mile of it until lost in the misty blue of the horizon. Yet, go where one would, bees would be working it, bless them. Is it too much to say that more hawthorn nectar has been stored this year than in the memory of any living man? What a wondrous effect it had upon the queens. What breeding has taken place. From one hive, Holmewoods, came forth a swarm of 5 lbs., followed two days after by one weighing half a stone, and yet the parent hive seems bubbling over with happy, merry, hustling bees. Also passing is the chestnut blossom, the bluebells in coppice and wood, the crab blossom and the guelder rose. It must needs be so, and the joy of such a spring has been great. But the Kalendar tells us there are yet several days to summer, and the harbingers of the second season are already splashing the hedgerows with colour. The elder and the dog-rose are showing well, while within the garden roses, sweet peas and honeysuckle are at their best. I wonder why flowers yielding such sweet odours are ignored by the bees. I have watched a row of sweet peas, a bush of honeysuckle and bushes of roses, and find them a great attraction to the bumble and solitary bees, but the hive bees hie themselves off. I wonder if one had a rod of sweet peas all of one shade whether the hive bees would use them. Why these insects object to dodging from pink, crimson, blue, cream and white flowers when foraging I have not yet found out. Is it a fad, or is there method in their madness? A field of blue flax will attract all the bees of the neighbourhood, but plant a few rows in your garden and they will fly over it as if 'twere an insult to their dignity to expect them to work it. Borage, again, if massed, proves irresistible to the bees in the height of the honey-flow, while a few odd plants might as well not exist for all they will be noticed. I am willing to allow that when the honey-flow has passed and an autumn nip is in the air, anything yielding nectar, even laurel leaves, will not be left alone. Possibly the explanation lies in the desire of the worker bee to fill her honey sac as quickly as possible. Acres of blossom

enable her to do this, and still bid her come again. For many weeks yet there will be this abundance unless the clouds refuse to come and refresh the soil. Although so much spring beauty has gone, the lush meadows are still sparkling with buttercups, while a peep among the grasses show the hop clover bursting forth, and that choicest of all the tiny flowers, the blue veronica, is flowering so profusely that the ground seems covered with a diaphonous mist. The sycamores are dangling their nectar-rich florets in great crowds. Among them are the bees, but we hope all they get from this source will go to feed their young, or be stored within the brood chamber. I am hopeful, because I see acres of fallow ground yellowed with charlock, then will see the bees coming home loaded almost beyond the power of their wings. Watch them fall in hundreds as they try to strike the alighting board, and know that thick, clear rich honey is coming in. Get your extractor ready, for charlock honey will not remain long in liquid form. Let your sections candy if you like; some people like cutting up sections in chunks. This morning I passed a field of sainfoin, and the clover is beginning to bloom; the land is covered with honey. Trees and hedges have done their flowering, but the fields are showing the footprints of God. One splendour passeth and another cometh. Oh the pure sweet joy of the countryside!—E. F. Hemming, Steeple Gidding.

Week-End Bee-Keeping.

By S. H. Smith.

(*Continued from page* 261.)

The next move? Haven't you had enough for one day, "D. B."? Well, if you insist on your pound of flesh I will come to your apiary as agreed, but I can hardly see the use of it. Make it 4 p.m. Maybe, as you say, the blue paint will be dry by then, and we can transfer the bees into the new hives. It is only 12 o'clock, and you have a whole hour to go leisurely homewards.

All right. I'll outline our future policy in a few words.

Those good queens will have been very busy during this fine spell of weather, and I expect to find the double brood chambers well filled wth eggs, larvæ, nectar and pollen. Modern bee-keeping aims to eliminate all swarms, but those controlled by the bee-keeper. This keeps intact a large gathering force in one hive. Now if swarming is necessary to satisfy some instinct in the bees it is up to modern bee-keeping to justify its methods.

Up to the time of the main honey flow Italian bees will be producing brood when unrestricted as to space. The daily income will be used up in increasing their numbers. They start a little later than the native Blacks, but they will be still raising brood when the latter are already storing honey. Hence the reason for two brood chambers for Italian bee stocks during fruit blossom time. The two races of bees call for different management. By giving the second brood chamber when the first is full of Italian bees we satisfy this instinct for more room to expand their brood nest.

If everything is as I anticipate we shall add yet a third brood chamber this very evening to each stock. We shall place this on the floor-board, and into it will go the queen, three frames of brood and seven frames of foundation. An excluder will be placed over it, and on top will go the other two brood chambers. Three frames of foundation will take the place of the three frames of brood put below.

This is one of the best methods to keep a large bee force happy and contented in one hive. The young bees have ample opportunity to let their wax glands act by building out ten extra combs, seven below and three above the excluder. Upstairs they will draw out a few queen cells. The queen odour is in the hive, and there is no panic. They go at it leisurely, feed and treat the queen larvæ generously, and their numbers ensure the essential heat and moisture necessary to raise perfect queen bees. Otherwise all goes forward normally in the stock.

As our queen bees are really fine ones we may make a third stock and utilise a couple of the queen cells. This will be our chance to gain our first dividend from our venture. But naturally we shall have to wait and see if our queen has mated with an Italian or a Black drone before we can offer the stock for sale as a pure Italian one.

The queen cells raised above the excluder will be sealed in ten days, and we should have to cut them out before then if we did not use them. After that, "D. B." our troubles would be over. From then on it will be only a matter of putting on more surplus boxes, brood chambers, shallow frame supers or section racks. We shall be off and going easy for the honey Derby race, and it will take good stocks to head us.

Now in deference to Mrs. "D. B." I have planned to run one stock for sections and one for extracted honey. Sections are pretty and dainty morsels, and they naturally please the ladies. Just which stock will be set to produce the sections we cannot tell until we examine the comb work of the bees. The stock showing the neatest and cleanest work in comb sealing will be chosen for that speciality.

At the beginning of the main nectar flow we shall shake or brush off all the bees from all the combs in the two top brood chambers of the chosen stock. These combs will be piled on to No. 1, making it five brood chambers high. No. 2, reduced to one brood chamber, will be given 2-3 section racks according to the number of the bees, and possibly we may place under the brood chamber a shallow frame super with frames containing inch starters only. The nectar rolling in by that time will just have to be taken upstairs. It is possible that we may be able to take off a completed section rack every week, or even every few days.

The main thing is to keep these section bees happy and contented. The enormous force crowded into one brood chamber and one section rack would soon show uneasiness. The 2-3 racks and the shallow frame super

will give the bees plenty of room and comfortable working conditions.

It will pay to take off the roof and to let the sun shine on the quilts above the sections so as to warm them and make the little boxes more attractive to the bees. Many a time have I brought the bees up quickly into sections by placing a black cloth over them to absorb the sun's heat rays. Anyway the section stock will call for more attention than the one devoted to the production of extracted honey. As soon as one of the racks contains drawn out and partly filled sections place another rack next to the excluder. The young bees spread the nectar in many cells before it becomes thick enough to store it for keeps. And, no doubt, they find an intense enjoyment in this labour.

Well, you must be going, but I've given you the principal points if you want to discuss the programme in the family circle. You say the whole family is on its toes about those "paying guests?" It is to laugh, "D. B.," all novices are anxious to get at bees. What? It is I they are after?

"D. B." handed me a folded paper he took from his note-book, got on his bike, and pedalled rapidly out of sight.

(To be continued.)

Whispers from Wickford.

On page 186 of BEE JOURNAL for April 20 the Rev. Hemming tells us one or two of his stocks propolised every frame down to floorboard. Surely his hives are wrong, and not his bees? As you know, Mr. Editor, I have been a bee-keeper for 27 years, and I have never had my bees do this. All my hives are made of used boxes from the grocers, mostly Tate's sugar boxes with the hoop off old buckets, bent straight, and nailed to hive sides to form metal runners for end of frames to rest upon, and all hives are 9 ins. deep from floorboard to top of metal runners, so there is a full inch clear under all frames, which all hang across the entrance. I think the reverend gentleman must have his hives too fleet.

Indigestion.—On page 192 you say you have never known honey to set up indigestion. Both my wife and I have had to give up honey on more than one occasion, and a young lady near my house never can eat honey. It sets up indigestion, with pains near the left shoulder blade, tightness of chest, and often heartburn. Hawthorn honey will sometimes do this, and so will honey from the oak tree, if too much is taken. Some of my family can eat such honeys, others cannot.

Dutch Bees.—Will you tell me just what a Dutch bee looks like. A friend of mine last year told me he had a stock of Dutch bees, and asked me to look at them. They were a large black bee. Another friend told me he had a skep of Dutch bees, and I went to look at them, but they had three dark leather colour bands round them. Yet another friend who wished me to give room to a stock he bought (from Mr. Bee Mason) which he said were Dutch-Italian, had all got three bright leather colour bands. On May 20 I transferred a stock of bees, called an eight frame stock of Italians from Taylor, of Welwyn, and strange to say these were nearly all dark bees, with a dark queen, and just a few with bright leather colour bands. So far as I know, I have never seen a stock of true Dutch bees, so if you can tell me if they are larger than our well-known black bee, and what colour, I shall be obliged.

Queenless Stocks.—I find there are several stocks that have lost their queens since March. After filling two, and in some cases three combs with brood, they have disappeared. I think they must have been balled through early manipulation.—C. REED.

[So far as our own experience goes, Dutch bees are just like our own native bee. If there is any difference they are slightly darker. Some Italian queens have been imported into Holland, and it is not at all unusual to find bees imported direct that are more or less banded with yellow. We have had bees direct in Dutch skeps that would have passed for Italians.—EDS.]

Jottings.

Hive Depths (Page 215).—It is almost confusing to have one's sails so ably "tacked" in such a tactical manner. I have found boards dressed to the widths your correspondent mentions which quite slipped my notice, with few exceptions my hives are double walled, not always double chambered. Sometimes I use an extra division board outside in winter, at others hollow on three sides, but lately I have knocked these out, as I am able to use one or two extra frames, and this is useful nowadays.

Where the boards do not hold up, and these sizes are just right, back and front, I do not mind a little more space at bottom, assuming the frames run towards entrance; on the other sides I tack a half-inch fillet on the top to form level with frames, projecting on the inner side a bare quarter of an inch to correct the spacing on the outside comb. This is worth the trouble, as this comb is often waste to the bees otherwise.

A tip for door slides is to keep the bridge between walls, or chamber up one inch, cut a corresponding hole through outer sides, and this forms an easy method of door slide, besides providing additional air when removed if required. These can be cut quite easily in a zi-zag manner as a wasp or robber remedy at their inner ends. Of course, these remarks are intended to allude to double-walled hives chiefly, but if the singles are cut an eighth of an inch longer than top bars of frame and a two by half-inch fillet can be tacked on to prevent frames touching walls, the same measurements apply. This also makes more room for packing and working supers if this is made the inside of super walls.

Any point not clear or touched upon I should be pleased to enlarge on to anyone interested, or will write on receipt of stamped envelope.—A. H. HAMSHAR.

Manchester and District Bee-Keepers' Association.

The Association opened the apiarian visits of the season by paying a fraternal to the joint apiary of Messrs. Blakeman and Brooks, of the Cheshire B.K. Association, at Bowdon. Mr. Brooks manipulated the bees, making a series of running comments on the different operations, giving many useful hints, and reasons for his methods of working; there were five distinct kinds of hives, W.B.C.; Simmin's Conqueror; Claustral; Combination; and one with commercial size frames 16 in. x 10 in.; the advantages and disadvantages of each received friendly criticism.

The hives being in Mr. Blakeman's school garden, we were told that the education curriculum of the school embraced Nature study, it was plain to see that in the garden and apiary practical and theoretical knowledge was taught.

We went on to Mr. Barron Walton's, where we had tea. Later on examining his two stocks we found them in a flourishing condition, beautiful queens, the slabs of brood proclaimed they were laying well, and the great quantity of bees told us they would give a good account of themselves when the honey flow came on.

Finally crossing to Mr. Kirkness, at Altrincham, we found his bees lived in tenements of distinctive colouring, there was no excuse for a bees to give if she entered another hive than her own. A Scottish queen ruled in one hive, her daughter headed another. An Irish queen was the mother of the bees in a third, with a daughter and her progeny occupying a fourth. English queens had given a good account of themselves in the remaining hives, but were now about to be superseded.

As we held up the combs to look at the brood or look for the eggs, we could not help seeing the new honey glistening in the cells, while some was already capped. Loads of pollen, almost white, pale green and deep orange were coming in in a continuous stream. When we looked for the source, pear trees filled up many a picture, each tree with its bossy bunches of snowy white, oft-times proclaiming itself the central figure of the spectacle; the apple, not so showy in the mass, presented its gradations of colour from its blushing pink to white as it opened its petals, displaying its pollen on the stamens, while its neltaries all the time were being rifled of their luscious sweets; a fortnight of summer in spring had worked a miracle; gooseberries had bloomed, given up their nectar, been pollenised, and young fruit was hanging on the twigs; new life was in abundance and everywhere.

Pollen, the vitalising energy of the flower, must be caught while new and full of sun-kissed energy and life; the bee was carrying it from flower to flower, and even taking some home to the hive to become part of the chyle food for the young larvæ in the cells. The orchards, the gardens, the meadows, the edges of the footpaths were vying with each other in producing new life, new colours, bright and fresh; white rock, stitchwort, wood sorrel, and anemone presented us with shades of one colour, broom, celandine, coltsfoot, dandelion with shades of another, forget-me-not and veronica like bright eyes, while auriculas, polyanthus and primroses ran through the whole gamut.

New scents were also floating on the lightest breeze; foremost to reach our sense of smell were those of narcissus and the wallflower. With these foretastes of summer upon us, we began to anticipate the bumping honey crop.—J. WHITTAKER.

North-East Durham Bee-Keepers' Association.

A representative meeting of Tyneside and district bee-keepers was held on Saturday, May 6, in the Hancock Natural History Museum, Newcastle, with the object of forming a local Association to meet their local, material and educational needs. Mr. Giles, of South Shields, presided over the gathering, and emphasised the needs of, and beneficial influences to be derived from, such an Association. Mr. Watson Egglestone explained the working of the Durham B.K.A., and informed the meeting that the D.B.K.A. had not received any grant from the County Council. After more discussion, it was unanimously carried "That a branch of the Durham B.K.A. be formed, to cover and work the N.E. area of Durham, and be called the 'North-East Durham Bee-keepers' Association.'" It was felt that South Northumberland bee-keepers were adequately served by the Tyneside branch of the N.B.K.A.

The meeting elected its first committee, with power to add to their number, as follows:—Miss Buglass (Ryton), Messrs. J. S. Giles, J. Jackson (South Shields), M. Scott, F. Fee; (Wreckenton), J. Ray, — Potts (Washington), E. Selkirk (Grange Villa), and J. J. Stout (Dunston).

The election of president, chairman, and treasurer were deferred until the next meeting.

Professor Meek, of the Hancock Museum, generously offered his services in any way to the Association, and he was heartily thanked for his offer.

On the conclusion of the meeting votes of thanks were accorded to the committee of the Hancock Museum for generously placing the lecture room of the Museum at the meeting's disposal.—JOHN BOYCE (Hon. Sec.), 18, Pine Street, Birtley.

The London and South-Western Bee-Keepers' Association.

This new Association is the outcome of the series of lectures on "Practical Bee-keeping" given last June by Mr. G. James Flashman, Expert to the Middlesex County Council and to the Middlesex B.K.A. The lectures took place at Grove Villa, by permission of Mr. A. Brook, who all well the use of his apiary for the demonstrations, etc.

The lectures were very well attended and most interesting, all having the opportunity of practical experience in subduing, handling bees, hiving and making the interior fittings of frames and their wax foundations, and the general management of the apiary.

At the close of the lectures it was decided to meet again in the following spring, and this was carried out, when this informal meeting was held.

It was decided to form a local Association, and this promises to be a useful institution to the bee-keepers in the district, with all the advantages of the county Association and its expert.

Bee-keeping having come so much to the front of late, through the Government and the County Councils throughout the country inviting people to take it up, and in some counties also providing stocks, so in order to help this movement forward in this district another series of lectures by Mr. G. James Flashman have been arranged, and commenced on Thursday, June 1, at 7 p.m.

Although the number is limited there are a few vacancies. Particulars, either of membership of the Association or to attend the lectures, may be had of the local secretary, Mr. A. Brook, Grove Villa, Stratford Grove, Putney, S.W.15.

The registered value of honey imported into the United Kingdom for the month of April, 1922, was £8,268, and yet there are tons of honey in the country and all around us in our own gardens and orchards that are lost every year for lack of enthusiasm and want of bee-keepers. Bee-keeping is both interesting and profitable.—(*Communicated.*)

An Exhibitor's Grievance.

[10654]. It has frequently been noticed how few are the entries for competition at honey shows. I have often wondered as to the reason of this. Was it lack of enthusiasm, or what could it be?

If I may be allowed to relate my own experience this may throw some light on the subject.

Having never aspired to exhibit honey before, I was prevailed upon last summer to exhibit at the local Bee-keepers' Association's show. The show day arrived, and in the evening I paid a visit to the show, which I must say, as an enthusiastic bee keeper, I thoroughly enjoyed. I eventually came to my own exhibit, and found I had been "awarded," very much to my surprise, a third prize. I must admit I was highly pleased with the result of my first attempt.

Now for the sequel. After the show I went home, and, according to rules, carried my precious exhibit home with me, and then waited for the prize that had been "awarded." I waited months in vain, for the prize failed to arrive, and I, being a novice in these matters, began to wonder whether I had misinterpreted the word "awarded," and that it was not usual to receive the prize, but accept the honour of the award. I should have been quite satisfied to accept this, if this was to be understood, so I eventually wrote to the local secretary of the Association, pointing out my complaint and asking for some explanation.

This was several weeks ago, and I am still waiting for an acknowledgment of my letter. I am wondering how my fellow-exhibitors fared.

I can scarcely imagine this to be the usual treatment meted out to would-be exhibitors, but if so, is it to be wondered at that it is with difficulty that bee-keepers can be persuaded to exhibit? It would be interesting to know of others' experiences of showing.

In my opinion it would only be common courtesy for the secretary to acknowledge my letter, but in my present frame of mind this will be my first and last exhibit, and I feel justified in subscribing myself

A DISGUSTED ENTHUSIAST.

Home-Made Feeder.

[10655]. With regard to the Rev. E. F. Hemming's tip for feeding with syrup by means of golden syrup tins to punch holes in the bottom of the tin rather than in the lid, how does he propose to warn the bees underneath to clear from the deluge?

If there are only a few small holes doubtless it would not be serious, but it would be appreciable, and cause waste. It might also cause the bees' wings to get stuck.

I would suggest a stage of perforated zinc which could be made to provide a bee way underneath, and be also convexly dished upwards to come into contact with the lid of the can where the holes are. An experienced bee-man with a carbolic cloth would not bother even with a stage.—JAMES B. BALLANTYNE.

Correspondent Wanted.

[10656]. I have just started bee-keeping, and would very much like to be given the address of any boy of my age who also is a bee-keeper, and correspond with him. My age is fourteen. I have started with two W.B.C. hives, one is stocked with a strong colony of Italian bees. Last year when my uncle was keeping the same bees, the hive next to the one I have got now took "Isle of Wight" disease, and died off, but somehow or the other the disease did not spread to the second hive. If any reader who is about my age should wish to correspond with me please send to my address, which is The Plâs, Glynceiriog, Denbighshire, N. Wales.—M. S. YEOMAN, Y.F.L.

Bees' Eagerness to Work.

[10657]. You may perhaps think it would interest your readers to know that in opening a skep of bees lately, which came from a long distance away, I observed pollen coming in within fifteen to twenty minutes of the time when the bees got their freedom. It amazed me that in such a short time the fundamental work of replenishing the larder could be so well under way, and I wonder if any reader has observed a similar occurrence.

I suppose a clamorously hungry brood spurred the ever-willing worker to special effort. I wonder are all bees as backward as mine this season—three weeks at least in arrears?—J. BARRETT, Pinner.

The Death's Head Moth.

[9933]. Could any of your readers inform me whether the Death's Head Hawk moth is harmful to bees? I have a very old print—German, I think—in which are represented bee-keepers going round their hives at night with lanterns, killing these moths.

To-night I found a Death's Head flying round some of my hives, and tried to catch it. It flew off. I went to the house for a net, and coming back, found the moth on the alighting board of my weakest stock, quite close to the entrance, fanning vigorously. There were no bees at the entrance. They had all gone inside, but came out after I had caught it.

If any of your readers could answer my question I should be very much obliged.—T. W. PURDY.

REPLY.—The Death's Head moth—one of the hawk moths—is an enemy of the bee, but is not common enough in England to cause any great damage. It has the power, very unusual in an insect, of emitting sound. It is somewhat startling when one takes hold of the moth to hear a somewhat harsh, if not very loud, squeak, something like that made by a grasshopper. In some countries it is very troublesome to the bees, and when it enters the hive is supposed to frighten and paralyse the bees by its cries, and it then accomplishes its object of robbing the bees of their honey.

Ventilation.

[9939]. As I am a regular reader of the BRITISH BEE JOURNAL I shall be glad if you will be good enough to explain the following passage in the Guide Book, page 63, at bottom. It says:—

"*Outer cases* are put on to protect the hives from the weather, and as the populations are enormous the fronts have to be raised by means of wedges about one inch high to give the bees access on three sides. The *outer casing* is also raised, etc., etc."

This I never could understand as it repeats itself. Does it mean that the brood box must be raised, and if so how can it be raised at the front only?

My difficulty has always been how to give ventilation, when it is very hot and the hive full of bees.—H. V. K.

REPLY.—The instructions refer to a double-walled hive having the brood chamber separate from the outer case, such as the Cowan or W.B.C. hives, both the inner or brood box and the outer case should be raised, and the other cases placed as shown in Fig. 40, p. 64, of the Guide Book.

Bee Shows to Come.

A nominal charge of 2s. 6d. is made for notices (not exceeding 7 lines) in this column, 10 lines charged 3s. 6d. up to 15 lines 5s., which covers cost of insertion from order till date of show. Cash should accompany orders for insertion.

Royal Show, Cambridge, July 4 to 8.—Over £40 in prizes. All classes open.—Schedules and all information from Mr. E. C. R. Holloway, Burwell, near Cambridge. **Entries closed.**

July 19.—Wickham Bishops and District Bee-keepers' Co-operative Association, in connection with Flower Show.—Three classes open to bee-keepers resident in Essex and one class open to residents in the British Isles. Prizes up to £1 1s. Entrance fee 6d. per class.—For Schedules apply, enclosing stamp, to R. A. Petty, Wickham Bishops, Essex. **Entries close on July 12.**

July 20 and 21.—Lincolnshire Bee-keepers' Association Show of Honey, Wax, Hives, Appliances, etc., at Skegness. Over £30 in prizes. Open and County Classes.—Schedules and Entry Forms from Major J. H. Hadfield, Alford, Lincs. **Entries close on June 19.**

July 22.—Wyke, Normandy and District Horticultural Society's Annual Show. Honey: 5 Classes (Sections and Extracted), Open; Honey: 4 Classes (Sections and Extracted), Local; 1 Class Wax, Open. The Surrey Bee-keeprs' Association offers to duplicate all first prizes in open section (Class 86 excepted).—For further particulars and Schedules apply to Hon. Sec., F. G. Kennard, Pirbright Road, Normandy.

July 22, at Mill Hill, N.W.—In connection with the Flower, Fruit and Vegetable Show, under the auspices of Hale and District Allotment Association. Classes for honey and wax exhibits for competition.—Schedules are ready, and may be obtained by sending stamped, addressed envelope to the Hon. Secretary, Mr. A. Bacon, Yew bank, Tennyson Road, Mill Hill, N.W.7. **Entries close July 15.**

July 26-27, at Cardiff, Sophia Gardens.—Glamorgan Bee-keepers Association, in connection with Cardiff and County Horticultural Society's Show. Open Classes. Special prizes: Taylor's W.B.C. Hive and Apis Club Bronze Medal.—Schedules from Secretary, Chas. F. Davies, 5, Borstal Avenue, Cardiff.

August 31, 1922.—Winchester Domestic Live Stock Association Show. Schedule of Honey Classes Open:—Class 5, one shallow frame; Class 6, six sections of 1922 honey; Class 7, six 1-lb. screw stoppered bottles of 1922 honey; Class 8, trophy of bee products to be arranged on table space 3 ft. by 3 ft.—Entry Forms to be obtained from M. W. Castle, 80, High Street, Winchester.

September 16 to 22.—British Bee-keepers' Association Annual Show at Grocers' Exhibition, Royal Agricultural Hall, Islington, London.—Schedules from Hon. Secretary, B.B.K.A., 23, Bedford Street, Strand, London, W.C.2. **Entries close certain September 4.**

October 12, at Ongar, in connection with the Ongar and District Agricultural Association.—Extracted and Comb Honey. Open to Essex.—Schedules from G. A. Taylor, Hon. Sec., Ongar and District Bee-keepers' Association, Ashcroft, Ongar.

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OVERSTOCKED.—For Sale, healthy Stocks or early May Swarms; would sell cheaply to clear.—MORGAN, The Parsonage, W. Kingston, Blandford, Dorset. f.44

STOCK OF ITALIAN BEES on 10 standard wired frames, 60s., carriage forward; case returnable; also a few 5-frame Nuclei, 30s., carriage forward.—HUNT, The Croft, Somerford, Christchurch. e.129

EIGHT STOCKS OF BEES on 6 and 8 frames, £3 and £2 4s.; carriage paid; one 3-lb. Swarm, 30s.; 10s. deposit on travelling box.—DRAPER, Yew Tree Villas, Park Gate, Swanwick, near Southampton. f.22

A FEW surplus 10-frame Stocks for Sale, 70s., carriage extra; carrier 10s., returnable.—ASHWORTH, Pound Street, Warminster. f.29

SWARMS, 25s. each, carriage paid.—DEAR, Funtington House, Chichester. f.8

SURPLUS.—Strong Stock Bees in bar frame hive, cheap.—CARTER, "Goldsands," Southminster. f.11

FOR SALE, Twist Drills, 5 32 in. to 7/16 in., 10 different sizes, 22 drills in all, every one new, 7s. 6d. the lot; postage 6d. extra.—Box No. 71, B.B.J. Office, 23, Bedford Street, Strand, W.C.2. f.24

ITALIAN HYBRIDS, Simmins' strain, surplus Stocks on 5 combs, with young Queens, 35s. each, carriage paid; June delivery.—ERNEST GRIFFITHS, Helsby, Cheshire. r.e.128

SWARMS, June, 8s. lb., Dutch, guaranteed healthy (always buy by weight). Orders in rotation. Note extract from letter received: "Up to the time of the introduction of these Dutch bees our average yield per hive was not more than half of the record yield given by these Dutch bees."—WOOD, Colewood Apiary, New Road, Mitcham, Surrey. r.f.32

AM OPEN to buy healthy Stocks.—PRYOR, Breachwood Green, Hertfordshire. e.138

CLEAN Second-hand surplus Bee Appliances, good, sound, well-made Combination Hives, Queen Excluders, etc.—DAVID HANCOX, Grove Lodge, Deddington, Oxford. r.e.130

FOR SALE, one 13-frame Stock, one 10-frame, and two Skeps of Italian Hybrids, healthy, and hives in splendid condition. Offers.—HOAD, Four Oaks, Beckley, Sussex. r.e.131

SELL.—Rotax all-brass Motor Car Head Lamps, self-contained acetylene, very powerful, 30s. the pair; two small powerful Acetylene Brass Head Lamps, with separate generator, suitable light car or cycle car, £3 the set; Austin Rear Wind Screen, mahogany framework, £7; Mills' Automatic Acetylene Generating Plant, suitable for 10-roomed house, £6; quantity of Acetylene Gas Brackets and Chandeliers, prices with particulars; small folding Magic Lantern, 30s.; motor cycle all-rubber Ponco, reaches to ankles, wind- and weather-proof neck and sleeves, 50s.; all carriage forward.—HERROD-HEMPSALL, Old Bedford Road, Luton, Beds. e.77

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FOR SALE, Stocks of Bees on 6, 8 and 10 combs at 5s. per comb, carriage paid.—GEORGE, 7, Woodside, Oswestry. f.40

FERTILE QUEENS.—Italian, 10s.; Hybrid, 9s.—TICKELL.

VIRGIN QUEENS, Italian, Black or Golden, 4s.; Italian Hybrid, 3s. 6d.—TICKELL.

NUCLEI, 3 or 4 frames, 30s., 40s.—TICKELL.

STOCKS, 6 or 8 frames, 60s., 80s.; boxes 10s., returnable.—TICKELL.

BROOKS' Improved Section Frame Super, 11s. 6d., post free.—TICKELL. Leaflet free.

BEES, HIVES AND APPLIANCES.—Lists and photos. free.—JACK TICKELL, Queen Breeder, Westbourne Apiary, Cheltenham. f.59

ITALIANS.—Nuclei, 1922 imported Penna Queens, 3-frames 32s. 6d., 4 frames 40s., carriage paid; selected 1922 Penna Queens, 10s.; immediate delivery.—ASTBURY, "West Farleigh," Wylde Green, Birmingham. r.f.58

TORTORA QUEENS, 8s. 6d.; four 28s. June 24th; rotation; cash with order.—HULBERT, Châlet, Warwick Road, Olton, Birmingham. r.f 56

NUCLEI for Sale, Italians, 28s. and 35s., 3 or 4 frames, young Queen; Hybrids, 25s. and 30s.; carriage extra; 6s. 6d. for box, returnable.—A. H. HAMSHAR, Wonersh, Guildford. f.48

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SURPLUS SWARMS AND NUCLEI of very best strains in Italian, Dutch and Hybrid; low prices.—WILKES, Expert, Pelsall, Walsall. r.f.45

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ITALIAN STOCKS on 8 frames, £3 15s.; prompt delivery.—J. H. DOGGETT, Abbey Apiary, Beche Road, Cambridge. f.49

FEW good Italian Nuclei, 3 frames 25s. 6d., 4 frames 33s.; Penna or Bozzala Queens by arrangement; box 7s. 6d., returnable.—THOMAS, Llansawel Vicarage, Briton-Ferry, Glam. f.50

FOR SALE, four Italian Nuclei on 4 frames, in non-returnable travelling boxes (value 5s., make excellent nucleus hives), Penna or Bozalla Queens, price £2 10s.; could be delivered in about 24 hours in Bournemouth district on boat days; disease unknown; also a few Hybrid Italian Queens, fertile, and a few Italian virgins, 5s. each, post free.—Apply, LOW, Larchet House, Alderney, C.I. f.51

"MELLONA" ITALIAN QUEENS, 10s.; Virgins, 4s. 6d.; Nuclei, 3-comb, 42s. The strain bred for producing vigorous, huge, controllable, non-swarming stocks, gathering bountiful harvests.—Obtainable only, MISS PALING, Golden Square, Henfield, Sussex. r.f.52

STRONG NUCLEI, 3- or 4-frame, guaranteed, 30s., 40s., carriage paid; Queens, 7s. 6d., tested.—BUTLER, Vines Cross, Sussex. r.e.25

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THE finest 4-frame Nuclei procurable, headed by 1922 "Utility" or imported Italian Queen, 35s., carriage paid; box 10s., returnable.—LEE, the Beeman, Burgess Hill, Sussex. r.e.150

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GOLDEN ITALIAN QUEENS.—These superior British-reared Queens need no recommendation. Goldens, 10s. 6d.; Three-bands, 8s. 6d.—E. COOMBER, Queen Breeder, 64, Ronald Park Avenue, Westcliff-on-Sea. e.132

A FEW strong, healthy Swarms for disposal, 35s. each; also 3-frame Nuclei lots same price; 10s. on each box, refunded on return.—WOOD, Cowmires, Galphay, near Ripon. r.e.154

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GRAFTON HONEY QUEENS are of the very best. Nuclei of guaranteed excellence, 3-frame £2, 4-frame £2 10s., carriage paid.—Particulars of MASOM & HEDLEY, Queen Rearers, Grafton Regis, Stony Stratford. f.57

HYBRID ITALIANS.—6-frame Stocks, 48s.; 8 frames, 60s.; carriage paid; box 10s., returnable. CLUBB, Cranston, Sudbury, Suffolk. f.1

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IMPORTED ITALIAN QUEENS, Penna's or Tortora's, June, 9s.; prompt delivery; Nuclei, 3-frame, 35s., headed imported Queens.—HENSLEY, Luton Apiary, Chatham. r.e.153

CAMBS, NATURAL SWARMS, as they come, Black, Hybrid or Italian, up to June 28 only, 30s.; Italian Bee Stocks, delivery any day from May 29-June 29, 8 frames, £3 15s.—S. H. SMITH, 30, Maid's Causeway, Cambridge. e.71

STRONG 4-frame Nuclei, pure-bred Italian, price £2, carriage forward; box returnable, charged 10s.—Old Henwick Farm, Newbury. r.e.115

PURE ITALIANS, 1922 Penna or Buckfast Queens.—4-frame Nuclei, 45s.; 6-frame, 50s., carriage paid, June-July; 10-frame Stocks, 1921 Queens, immediate delivery, 75s.—WADHAM, Gold Street, Cardiff. r.e.62

BRITAIN'S BEST BEES, as supplied by me to the Board of Agriculture. 6-frame Stocks, 45s.—LEE, the Beeman, Burgess Hill, Sussex. r.e.87

JACK TICKELL.—For Queens, Stocks and Nuclei. List free.—Westbourne Apiary, Cheltenham. r.a.54

STOCKS genuine Swiss Bees for Sale. Write for Descriptive Circular.—DAVIDSON, Forest Road, Burton-on-Trent. c.196

SWARMS BOOKED, May delivery, Italian, Carniolan, Dutch; low prices.—DAVIDSON, Forest Road, Burton-on-Trent. c.198

STRONG STOCKS healthy Dutch Bees in Skeps; reduced prices, immediate delivery. Write actual importer.—DAVIDSON, Forest Road, Burton-on-Trent. c.196

ITALIAN, Carniolan and Hybrid Stocks and Nuclei for Sale, strong and healthy, delivery May, low prices.—DAVIDSON, Forest Road, Burton-on-Trent. c.197

ITALIAN QUEENS by RETURN OF POST. Tested, 12s.; Untested, 10s.—PEARSON & GALE, Marlborough.

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	May.	June.	July.	August.	September.
One Young Pure Fertile Italian Queen	10/-	9/-	8/-	8/-	8/-

SPECIAL OFFERS, until countermanded, for queens in lots of 4 at a time: From June 10th to June 30th, **£1 8s.;** from July 1st to July 31st, **£1 4s.** Orders booked in rotation, cash with order, carriage paid, safe arrival guaranteed. Payment by cheques or British postal orders. International money orders are **not** accepted. 10% discount to Apis Club members on my prices, **except** on "Special Offers."

FINEST ITALIAN NUCLEI, with Cannell's imported 1922 American Beauty Queens; satisfaction absolutely guaranteed; May, 3-frame 45s., 4-frame 55s.; June, 40s. and 47s. 6d.; carriage paid; travelling boxes returnable.—HOGAN, Boxford, Suffolk. d.71

DUTCH, ITALIANS, HYBRIDS. 6-frame Stocks, 45s.; 4-frame Nuclei, 35s.; Swarms, 25s.; May delivery; carriage paid.—LEE, The Beeman, Burgess Hill, Sussex. r.d.59

LANGSTROTH HIVES. — Perfectly simple, simply perfect, international standard; as efficient in this country as elsewhere; make the bees pay; our speciality. All Accessories. Swarms of Bees. Finest Queens.—DICKINSON & OWEN, LTD., 25, Bartlett's Buildings, Holborn Circus, London, E.C.4. 'Phone, Holborn 824. Equipment in British sizes to special order. Illustrated Catalogue now ready, post free. r.d.35

QUEENS by return from April till October.—PEARSON & GALE, Marlborough. w.14

BOOK NOW!—Choicest home-bred Carniolan Queens for 1922.—PEARSON & GALE, Marlborough. b.24

DUTCH BEES.—Send for my artistically Illustrated Catalogue outlining my method of managing bees profitably. Read my notes on Queens and Queen Rearing. Will interest the expert and amateur. Free for the asking.—WHYTE, Bee Farm, Cumbernauld Station, Dumbartonshire. r.b.32

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Italians—Nuclei, 3-frame, 1922 imported Queens, May, 40s.; June, 30s.; carriage paid. Returnable boxes, 10s.
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BENHALL, SAXMUNDHAM.

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QUEEN CAGES, suitable for British Isles, for travelling or introduction, 4s. 6d. per dozen, postage extra; 56-lb. tin Wiltshire Honey (granulated), 65s.—ASHWORTH, Pound Street, Warminster. f.30

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HAVE YOU READ "THE BEE WORLD"? If not, why not? Every number in itself is a useful literary work for practice and reference. Specimen copy free.—Offices: THE APIS CLUB, Port Hill House, Benson, Oxon.

PENNA QUEENS.—Please note precise address: ENRICO PENNA, Casella Postale, 178, Bologna, Italy. r.c.141

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BEE APPLIANCE MAKER, WEST ASHLING, CHICHESTER, for Catalogue and quotations.

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HONEY BOTTLES.
1 lb., 30s.; ½ lb., 25s. per gross; per dozen, 3s. 6d. and 2s. 9d.
CAPS and CORK WADS complete.
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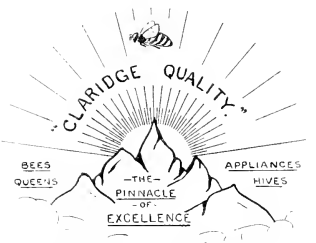

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Before placing Orders send for my Catalogue. It will pay you.

24 pages original matter, outlining a new system of profitable management, notes on queens and queen rearing. Full of Illustrations.

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Far and away the largest importer of bees in Britain. Dutch bees are resistant to disease. Dutch bees are prolific. Dutch bees hold the record for honey production. Dutch bees are gentle.

WHYTE, Bee Farmer, Cumbernauld Station, DUMBARTONSHIRE.

THEY are mowing the Sainfoin here in the foothills. On Monday we migrate to Maure, par Seyne-les-Alpes **(4,390 feet above sea-level)** where the Sainfoin is just opening its first flowers and will be followed by sage, mountain thyme, lavender, winter savoury, alpine pasture plants and spruce honey-dew, making together a **heavy honey-flow lasting until the Autumn rains and frosts. Queens reared during a heavy, natural honey flow are Nature's best queens.** Only one other breeder on earth, (California, U.S.A.) goes to such trouble and expense in insuring choice queens for his clients : **I** deserve **your** orders : can **you** afford to order elsewhere ? Only the best queens bring the big profits ; and when you are satisfied, so am I : is that fair ? An **American Beauty** (pure) or a Carniolan Alpine queen mated to an **American Beauty** drone—July 9 -, Aug.-Sept. 8 -. Cash with order.

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We are now in a position to supply

WHITE FLINT GLASS SCREW TOP HONEY JARS at the following REDUCED PRICES.

"ACTUAL" & "NOMINAL," WITH SCREW CAPS AND CORK WADS.

1-lb.	- - -	32/-	per gross.
½-lb.	- - -	26/-	per gross.

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Book your order NOW, prices are sure to advance during busy season.
Goods despatched same day as we receive your order NO WAITING.

EDWARD TAYLOR & CO., *Glass Bottle Manufacturers,*
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"BACTEROL" FOR BEES

Half-pint bottle, 2 9 post free ; quart, 7/- post free.

Medicate your syrup by thoroughly stirring into it when cool enough to insert the finger, two teaspoonfuls of "General Bacterol" to each pint of syrup.

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We are actual makers of "Langstroth" and British size Hives and Equipment, Foundation, Tools, &c.; Bee Farmers and Honey Producers; try our home-bred pure Italian Queens.

TO MY PATRONS.—

I wish to announce that the Bee Hive and Appliance business which I have been carrying on under the original title of **S. J. Baldwin** for eighteen years, with which I have been connected for the past 30 years, and which is the oldest Bee Hive business in the United Kingdom, has been amalgamated with that of the "**Langstroth" Specialists, Messrs. Dickinson & Owen, Ltd.**, of 25, Bartlett's Buildings, Holborn Circus, E.C.4, who will continue the business as before, utilising the plant and machinery, wax foundation mills, etc., for the production of "Langstroth" Hives and equipment.

I have much pleasnre in stating that I shall be joining Messrs. Dickinson & Owen, Ltd., as Works Manager, and continuing at the old address, Stanley Road, Bromley, where a full range of samples and stock will be kept. For those who find it necessary to continue use of British Standard sizes, a stock will be kept on hand.

Not being a victim of prejudice, I have become a convert to the "Langstroth" Hives, which I consider suitable in every way for use in this country, and I am quite convinced that they will soon be the Standard Hives in the United Kingdom as in most countries.

Their **great simplicity** is the compelling feature, and should appeal to all.

Trusting that your greatly esteemed patronage of the past will be continued to the new firm, and proffering my best thanks for favours received.

Yours faithfully,
(Signed) E. R. SEADON.

TO OUR MANY BEE-KEEPING FRIENDS.

The letter on the opposite column speaks for itself, so we need not repeat the announcement; but in confirming it we would like to say that the combination of the **oldest Bee Hive business in the country** with **one of the youngest**, combining the ripe experience of many years with the vigour, enterprise, and initiative of youth, should surely make for success, bringing us many new friends and, we trust, no enemies.

The Secretary of our Company—Mr. C. S. J. Cruthfield—was the first to introduce the "Langstroth" Hive into this country on a commercial scale, and like most pioneers found for a time considerable prejudice and opposition. A few, however, of the more enterprising honey producers, professional and amateur, saw that a Hive which had given such splendid results in Canada and the States, must be worth considering for use here, and made a trial. That confirmed their impressions, and they ordered further quantities.

To-day we are constantly getting letters, and visitors, telling us **they are selling off British Standard hives and replacing with "Langstroth."** Very soon the great majority of British Bee-keepers will have followed suit.

It should be remembered that Langstroth, "the Father of Bee-keeping," was the originator of the movable comb hive.

Many people quite naturally advance the argument that a change will mean a loss to them. Well, after all, it will only be a temporary set back; the old hives can be sold, and the longer this is delayed, the more old-fashioned hives, etc., are added to existing stock, and the greater the loss must be. **So now is the time to change.**

We are the only House in the U.K. stocking all "Langstroth" Hives and parts, etc., and your valued orders will receive careful attention. **Write for our Catalogue giving fuller details of our goods,** and simple directions for transferring from British Standard, etc., to "Langstroth" hives.

In conclusion, if you are not already a member, we would advise joining the Apis Club. If you are a customer of ours, we pay your subscription in the form of special discount (see our catalogue). Membership gives you many advantages.

Always at your service for Better Bee-keeping.

Yours faithfully,
DICKINSON & OWEN, LTD.

The following unsolicited letter has just been received by us from the well-known authority, Mr. John Protheroe:—

Rustberg, Virginia, U.S.A.
May 6th, 1922.

MESSRS. DICKINSON & OWEN, LTD.

DEAR SIRS,—

I am much interested to see your efforts to popularise the "Langstroth" Hive in England. I wish you every success. I am a British Bee-keeper with seven years' American experience, some of it in the monster apiaries of the South, and I have preached incessantly to the home folks the necessity of adopting a uniform, cheap, large, and simple hive as a basis for building up apiculture as a considerable rural industry, instead of the numerous and various fallals, too small, too complicated, and too expensive, which are the British Hives of to-day.

Dr. Everett Phillips, of Washington, the chief apiarist of the U.S. Bureau of Entomology, is perhaps the best combination of scientific entomologist and practical bee-man that has yet appeared; he says that simplicity of equipment is the gauge by which the progress of apiculture in any country can be judged. If this be so, what are we to say of old England?

If British Bee-keepers would turn to Langstroth's "Hive and Honey Bee" and study figures 130 and 131 they would discover that the essential features of the W.B.C. hive, the outside lift corresponding with the inside super, the dead air space, the elaborate porch and alighting board that entail so many small parts, are not inventions of the late Mr. Broughton Carr found necessary for the peculiar conditions of British apiculture; not at all, they are merely discarded features of an early type of Langstroth.

The expert manager of one of the principal Bee Hive Manufacturers in the U.S.A. states that his firm sends large quantities of W.B.C. Hives to England. They are made in Ohio, and sent 400 miles by train to the coast and then 3,000 miles of sea journey to British ports. If British bee-men are clinging to their models from patriotic motives of supporting home industry, they require a little enlightenment.

Hoping that your enterprise may do much towards converting British Bee-men.

I am, yours truly, (Signed) JOHN PROTHEROE.

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The Bee-Keepers' Calendar.

JUNE, 1922

15 Thursday. "Lilies like thoughts, roses like weeds,
In the sweet brain of June;
The bees there, like the stock-dove birds,
Breathed all the air with croon."

Masefield, "The Hounds of Hell."

16 Friday. "In the meadows flowery grass
Makes both milk and honey flow."

George Wither, "Summer Time."

17 Saturday. "For now the noonday quiet holds the hill;
. . . . . .
The purple flower droops: the golden bee
Is lily-cradled: I alone awake."

Tennyson, "Œnone."

18 Sunday. "In the old Hebrew myth the lion's frame,
So terrible alive,
Bleached by the desert's sun and wind became
The wandering wild bees' hive."

Whittier, "The Hive at Gettysburg."

19 Monday. ". . . Bees that soar for bloom,
High as the highest peak of Furness-fells,
Will murmur by the hour in foxglove bells."

Wordsworth, "Nuns fret not."

20 Tuesday. "The garden's silence—even the single bee,
Persisting in his toil, suddenly stopt
And where he hid you only could surmise
By some campanula's chalice set a-swing
As he clung there."

R. Browning, "Pippa Passes."

21 Wednesday. "O thou to whom
Broad-leaved fig trees even now foredoom
Their ripened fruitage; yellow-girted bees
Their golden honey combs."

Keats, "Hymn to Pan."

Current Prices.

Several readers have written asking us for the prices of swarms and honey. A study of our private advertisement columns will generally give anyone a good idea of the ruling prices. Swarms are, of course, not worth so much as last month, and we should say a fair price now will be about 6s. per lb. It is always better to buy or sell swarms by weight.

It is too early in the season at present to say what price this season's honey will make. Much will depend on the crop, and no one can yet say what that will be. Another factor is the quantity, quality and price of imported honey. English honey is at present priced in the shops, from 1s. 9d. to 2s. per 1-lb. jar, and good sections 2s. 6d. When we get to know what prices are likely to be we will give them. In the meantime, those who have sold honey can do a good turn to others by quoting prices made.

A Dorset Yarn.

"Who can read the growth of flowers?"

Bees note the opening flowers, as Lord Houghton says, "syllable by syllable." In them is food for themselves and the helpless young in the cells, or cradles, in the hive. But how they tell each other is really wonderful; they seem to leave one unit of the floral kingdom severely alone and fly to some other unit. Sense of sight and smell (books tell us) is the guide to the different units of flora. Cheshire says they get their "accurate vision with the compound eye, which has so many facets." Maurice Gerard writes, "The small eyes, 'ocelli,' have a microscopic function for work in the hive." Bees this year left the holly trees all at once and flew away toward another unit in another direction. Cheshire describes how they smell with parts of antennæ; when there are a lot of blossoms the perfume is great, and one can easily realise their soon finding them. But when the single flowers open first, as they do on raspberries, just the one at the point, bees are there at the opening, and there cannot be the wealth of perfume there is when the next flowers open, as these are so numerous. It is not hunger that makes them search, as it is with stock in winter when out in pastures; where food is short they will search for a weak place in fences to break through; they must eat to live. But bees always have some stores in the cells; yet they find the first flowers as they open; then they all go in crowds for these new units of flowers, and they leave units like the holly entirely. It is either they realise the nectar is dried up as the fruit develops, or the strong perfume in these other units attracts them. If, as Cheshire describes, the antennæ have 20,000 organs of smell, yet as they must be exceedingly small it is wonderful that they find the first flowers as they open.

The perfume of *Trifolium incarnatum* is strong; it can be detected as one goes by the fields in a car. Have had business meetings in West Dorset, with rich farm lands. Round the immense hills and picturesque valleys the perfume of clover was easily detected as one went by; the huge fields of this were to be seen long distances away when on these enormous hills. We passed fields of beans in blossom, but could not detect the smell. We have had peas and beans in flower for some time, but they do not have the great wealth of flowers as do the beans that are grown for food for draught horses. Our first lot is ready for harvesting green, as I write this on the Sunday morning. Must take frequent journeys to the peas, or rooks would soon spoil the lot. This has been so this last few weeks, as these develop the fruit in the pods. These marauders soon find young peas, beans and potatoes; they are about soon after dawn. There is no sleep for the farmer, who knows the havoc they work with early crops.

We have seen the bees on the raspberries as the sun rises these warm, bright mornings. We always work near the peas till the staff comes at seven, but Sundays it is a long wait, as no member of the staff comes to relieve the guard. "Sweet is the breath of morn," a writer tells us. The skylark began mounting up in the sky and chanting his song of praise before the first rook came over.

But the yarner is digressing. To go back to bees and perfume of flowers: Those who have lived a lifetime with flowers can distinguish the different units as they bloom. But in early morning "There blow a thousand gentle airs, and each a different perfume bears. Fresh as if day again were born. Again upon the lap of morn: When the light blossoms rudely torn and scattered——" This is in Moore's "Lalla Rookh." If man can differentiate the perfume of flowers, bees also must have a marvellous sense of smell in so little a carcase.

I have noticed this last week that bees are inclined to be bad-tempered. Is it that the flowers are drying up and they are finding surplus stores are getting short? Several of the hives have dead drones on the front, as if they are commencing the "massacre of the innocents." This is what they did last year as the flowers dried up. When fully-developed drones lay on their backs in the morning, to me it is a sign of shortage; yet charlock is plentiful and blackberries are only just opening; there ought still to be plenty of nectar to gather. All excluders are taken away from beneath sections; have only one beneath some standards wanted for exhibition. Excluders are not a help to surplus honey, but a comb with some honey will bring them up the first day and will keep them up continuously. We have some stocks with three lots of standard bars, but no excluder. A near neighbour has extracted 60 lbs. of honey from one hive; this must be largely fruit blossom. This early extraction is always of good flavour.—J. J. KETTLE.

Jottings from Huntingdonshire

It has been a week of swarms. Wise bees swarm in time for the main honey flow. The Goldens are excelling themselves this year For the first time in three years my bees are working the dog roses, and diligently too. Watching them at work on a briar this morning, I noticed they were joined by some real native bees, domiciled possibly in some hollow tree. I say "real native," because I wish once more to emphasise that the native English bee is black from the thorax to the sting, as black as Whitby jet, their abdomen being shaped very unlike Dutch and Italian bees, almost V-shaped. The bees, common in this country, so often called native, are the descendants, more or less direct, of bees introduced into England a century ago from Teutonic sources. That the Dutch bee is like the latter is true, but all Dutch bees, if true, should have light rings around the abdomen. It is worthy of note that Dutch bee-keepers many years ago scotched a bee disease by giving them more wax-making to do. Wax secreting is natural to the bee, and it is folly to assume that you save the bees and secure more honey by saving them the trouble of comb building. I am not at all sure that the extra honey got pays for the cost of the foundation. One uses foundation because it ensures evener comb building. Let me give the result of one or two experiments. Two swarms issued on the same day, one weighing 4½ lbs and the other 7¾ lbs.; these were introduced to hives each of ten frames, one having full sheets, the other half sheets of foundation, and note the smaller swarm had the lesser amount of "weed" to start upon. By the end of the week the condition of each stock was about equal: at the fortnight the smaller lot had got ahead of the larger It is difficult to compare beyond this, as so much depends on the virility of the queens. Another experiment. I introduced a swarm into a hive with nine frames of full sheets, and one with about half an inch of "weed" secured to the top bar. These frames were parallel to the entrance, and the practically empty frame was seventh from the entrance. At the end of three days this frame was built in with comb, while frames six and eight had not been drawn out. This shows that bees appreciate the opportunity of secreting wax. The speed with which a swarm will fill a skep is proof that wax secreting does not reduce the quantity of stored honey to the extent that is sometimes thought. True, the production of wax means a great consumption of honey, but what of that if the bees are all the better workers after the comb building is complete. I intend at a suitable opportunity to introduce a swarm into a hive fitted up and one into an empty skep. Weigh each lot on introduction and again ten days afterwards, and report the result. Lest I am mistaken let me say that I am strongly in favour of giving at least one frame of drawn out comb to a swarm, as it gives the queen an opportunity of laying at once if she so wishes.

The sun still pours down his burning rays, and the countryside is thirsting for rain: we hope it may soon come. Whether a dripping June puts all things in tune or no I will not say, but this I know, that our hive friends will be all the happier if we can get a day of rain. It is a month since we last had a shower. How dependent we are upon elements in this little world.—E. F. Hemming, Steeple Gidding.

Week-End Bee-Keeping.

By S. H. Smith.

(*Continued from page* 280.)

If I had to instruct the whole family of D. B.'s there would be plenty of time to answer questions when transferring the bees that afternoon. So I stuffed the folded note into my pocket and returned to the bees.

All the same, I had an uneasy feeling, and regretted I had bounced back so far and fast when I had touched that wet blae paint. By putting the hives in the sun it would have dried in no time, and everything would have been over by now.

Handing out bee lore to a novice is all very well when working leisurely, but when quick action is wanted I'd rather work alone if no experienced bee-keeper is available to help me.

There were three double brood-chamber black bee stocks that I wanted to change into Italians, and that meant finding and caging the queens. Some black bees are nervous creatures, given to falling off the combs and running like a flock of sheep into corners; and some black queen bees are elusive and artful dodgers.

The quickest and surest way I know of finding a black, or any other queen, is to divide the stock and let the bees tell you which part she is in. You then put an excluder over the uneasy queenless part and place an empty brood-chamber on the excluder. Taking one comb at a time of the queen right part, you brush or shake the bees on to the excluder. While handling the combs you may spot the queen on one of them. If not, she is easily seen endeavouring to follow the bees through the slots to the brood combs below. A wooden-framed excluder is the only kind to use.

After dividing the three stocks, I went to the honey-house to prepare three queen cages. There are always bee-keepers who desire black queen bees, and it is easy to dispose of a small surplus. You put a dozen or so attendant bees in with each queen and place the cages, wire cloth side down, over the stocks they come from. This allows the queens to relieve themselves of eggs, and after a few days they will travel comfortably and safely in the post.

On my way to the honey house I saw two topaz-coloured eyes, gleaming like jewels, from under the damp bricks which held up the rain barrel. I waved my hand in greeting—Old Omar, the apiary toad, had come back. In 1921 I'd kept his rain barrel going

until the ditch ran dry. He had then left the apiary, and I thought we had lost him.

I don't believe in "larning a toad to be a toad," but when we first met I grabbed him by a leg and flung him ten yards into the field of barley on the other side of the deep ditch. The growth was high and dense enough to break his fall, but he landed with a distinct thud. Two days later he was back in the apiary.

I threw him out because I found him squatting near a hive and gobbling bees as fast as he could throw out his tongue. Since taking possession of the cave under the rain barrel he appears to behave himself better. In the cold-blooded consciousness of Omar it is probable that I do not exist, but I like to see him around, and he is welcome to a bee or two now and then.

It is interesting to note how animals, birds and even insects divide up any desirable territory and fight for possession. Might prevails, of course, and established rights must be held by force. He who fails to put up a good fight goes down quickly. The males struggle for and pre-empt certain terrains; the females choose their mates from these victors.

Two black queen bees had been caged and supplied with attendants. It is easy to pick the latter off a comb with unsealed honey. When lapping up the nectar the head of the bee is well into the cell, and the wings stick out, so that they may be grasped without any risk of it being able to use its sting.

That uneasy feeling was coming again, but I could think of nothing to cause it. The third black queen was in sight with her head in a slot, struggling to get through and I reached down to seize her. A sharp pain in my right leg made me jump and push the excluder. To save time I was using an unframed one, the one I should have used being dirty. The sharp edges slid over the tops of the frames and a fine black queen was decapitated.

I looked down, and there was old Satan, the apiary cat, with her claws in my leg. She has no manners; clawing is the only greeting she knows—her home is the fields and the outhouses on surrounding farms. I cursed her good and hard, but she stood waving her tail and looking at me without flinching.

I glanced at my watch—two-thirty!—long past lunch time. I'd forgotten to set the alarm clock. Though Satan and I had not met since last autumn, she remembered what time a cat should eat when a certain biped was around to feed her. Sitting under a fine beech tree we ate the sandwiches I had brought.

D. B. and two delightfully pretty and charming little girls, evidently twins, were waiting for me at his gate when I arrived there at four o'clock. I knew, of course, that he had a wife and children, but, so far, I had not seen them. He gave me in charge of Daphne and Beryll to show me round the garden, and somehow we got to the hives in a few minutes. By that time I did not know which was which, the children were so alike in features, dress and manner. But one of them said, "There will be no greengages this year, Mr. Week-End," and the other chimed in, "Some horrid man hacked our nice greengage tree all to pieces."

That uneasy feeling was coming again. I mopped my head and looked wildly about for D. B.—but he was nowhere in sight.

(To be continued.)

A Visit to an Old Bee-Keeper.

On Sunday morning, May 28, a glorious day for bees and bee-keepers, I had the honour of visiting Mr. John Blackburn, of 177, Oxford Gardens, Stafford, and congratulating him on attaining his ninety-fifth birthday.

It was a unique experience to see this veteran bee-keeper, now confined to his bedroom, but still able to sit up comfortably against his bed-rest, and talk with enthusiasm about bees and bee-keeping experiences.

What glorious weather! "What a grand time the bees must be having! It seems as if the disease is about being cleared out," were some of his remarks as he reached and handed me a copy of the last issue of the BRITISH BEE JOURNAL, which he had just read through. "I have taken it in from the beginning, and it is still on order to come by post till Christmas. I don't think I should have lost my bees when the others did six years ago if I could have looked after them like I used to," was his consolation and explanation of not having any at present.

Born near Bolton, Lancs., he spent his school days at the Mechanics' Institute, Liverpool, where his father, Mr. Isaac Blackburn, was chief clerk at Lime Street Station at one time.

He started bee-keeping in his 'teens with a gift of bees from his aunt, and never gave them up until compelled to by advancing years. In his early manhood he drifted into the Stafford district, and for thirty years was gate-keeper at His Majesty's Prison. During his term of service he several times refused promotion, and retired at the age of 60 on his pension. His retirement apparently only increased his activities, and he recounted to me a visit he paid to one of the great London shows, when he took an exhibit of honey in a glass super weighing 40 lbs. Asked if he could give the names of any of his co-exhibitors that he met there, he replied that he could not, his memory was getting bad, but his eyesight was good.

Other local bee-keepers paid their compliments the same day, and among the presents honey was predominant. Mr. Blackburn discarded sugar many years ago, and uses honey in its place.

I feel sure my readers will join me in their congratulations, and rejoice to hear that such a veteran of the craft is being well cared for by his family, and join with them in wishing that he may be spared to see his 100th birthday. — JOSEPH PRICE, Stafford.

Unedited Letters of Huber.

(*Continued from page* 237.)

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THE STING OF THE BEES HAS BEEN GIVEN THEM FOR THEIR DEFENCE. — LIZARD KILLED IN A HIVE.—THE ODOUR OF THE STING IRRITATES THE BEES.

To Miss Elisa De Portes.

Lausanne, May 17, 1828.

You do not believe, dear Elisa, that those bees which I desire you to love have invented the laws which rule them. I ended my last letter in telling you what you must believe as I do; that it is to the supreme Law-maker that our admiration is due, as well as our love and our gratitude, for He has evidently thought of the existence and the well-being of creatures which, like ourselves, have no means of defending themselves against the attacks of those who are constantly provided with a sting accompanied with mortal poison. What would be our fate, if we could not walk about our gardens without being in risk of attack and pursuit from thousands of winged and wicked beings?

Let us see what has been done for those bees, which are, also, His children, by this best of Fathers. If attack has been forbidden them, they have been ordered to defend themselves; do they then have enemies? A very large number of insects and reptiles plot against their treasures and try, through robbery, to enter their homes. Others try to enter there, to deposit upon their combs eggs which will find there the only food that they need. Since it is every day and at every hour of the good season that the bees are in danger of the invasion of so many enemies, preserving Providence demands of them a sustained watching, very wonderful for the brains of a fly, a supervision in every moment which is worthy of admiration.

I tell you this because I have seen it, not with my own eyes, but through the help of those who have put theirs to my service, and upon whom it has been necessary for me to rely; this observation has been the first one of all those that I have made. I already knew, through others and especially through the eminent Reamur, the fine order which reigns in the bee hives, but I ignored entirely when and how this order could be disturbed; chance taught it to me.

One day we were expecting a swarm to issue; I had stationed myself near the hive which was to swarm.

It was a great glass bell, sheltered from light which would disturb the bees, with a veil that could be removed—just as you remove your own—so that we might see what took place within the hive without causing any noise or jars that might alarm them. It was warm that day, drowsiness overtook me and I went to sleep, with my head resting against the hive which I had undertaken to watch. Suddenly I was awakened by a noise coming from the hive and which appeared to me much greater than the humming that one always hears in the habitations of the bees and which is usually very soft. I rang for Burnens, to seek its cause. Great was our surprise when, after having lifted the veil, we saw, on the bottom board of the hive, a fine and big green lizard, lying on its back and slain with violence, as you will soon see. Near its dead body some thirty dead bees were also lying. Had they been killed by him in defending himself? This was our first impression; but we soon altered it when we saw, driven into the belly of the lizard, all the stings of the bees which had put him to death by sacrificing their own lives for the safety of the household.

Paley says, in his "Physical Theology," that one finds in the insects the models of useful instruments. One finds there, also, dear Elisa, beautiful examples to imitate. Is not death in defence of one's country the first and most honourable of our duties? The ancients who did not disregard this, wrote in their beautiful Roman language: "Dolce et decorum est pro patria mori." (It is sweet and beautiful to die for one's country.)

My sleepiness had not permitted me to see the first act of this tragedy; but other examples of a similar occurrence, noticed in similar circumstances, enable me to tell you without hesitancy what had evidently happened.

The beauty of the weather and of the expected harvest had evidently attracted a third, or perhaps a half, of the workers to the blossoms; those which other cares retained in the hive were probably thinking about the proposed founding of a new home, and perhaps did not, as usual, watch the entrance of the hive against enemies and keep a sufficient guard there.

The lizard was thus able to enter without finding great opposition. He was perhaps lucky enough to eat a few of the sentinels in passing, but it was not with impunity. In case of an attack, general or individual, the rustle of the workers, caused by the rapid buzzing of their wings produces a sound which may be termed a danger call.

This call, with which I am acquainted, and which I can readily distinguish from any other, is, you may believe, still better perceived by the bees. This buzzing finds an echo in all parts of the hive; when they are made of glass it is as easy to see as to hear it. It is therefore thus that they transmit advice of any danger which threatens them and the request to be on their guard in any part of the home. If the signal which announces danger to them has but the duration of lightning, its effects are truly equal to those of a thunder-bolt.

Worker-bees in sufficient number, and doubtless in proportion to the strength of the enemy, rush upon them and at once put them "hors de combat." We know by our own experience that their death must be as painful as it is prompt.

(*To be continued.*)

Notes from Gretna Green.

Weather is favourable and bees very active, but the real honey flow has not arrived, although almost due. The majority of colonies are quite ready for action, and any that seem non-progressive now should be marked down for early re-queening. Judging from various reports and my own experience, something like a plague of inferior queens was sent out by many breeders last season, and great care should be taken in buying again. Many were surprised to find the powerful colonies they closed down in autumn reduced to a dozen bees, and their queen the following April, and there must be some reason for this. It cannot be explained by the presence of disease or absence of pollen in spring, when colonies side by side in the same apiary offer marked contrasts. For instance, I closed down one colony on large Quinby size frames and two others on 16 x 10 "Commercial," The former is now extremely populous, covering twelve large and a like number of Standards with the queen laying in both storeys, while the Commercial colonies dwindled constantly, and were finally united to make a fair stock.

In the first case the queen was reared on natural lines, and I should say is worth rather more than her weight in gold, while the other two reared on "scientific" principles, would have been dear at any price.

The scientific breeders claim that they are able to rear better queens than the bees can do unaided, but until given conclusive proof on this point such statements will be taken *cum grano salis* by J. M. Ellis.

Notes from East Stirlingshire.

One of the mildest winters up to the end of January, followed by one of the most atrocious springs on record—snow, frost, wind, rain, and again frost—and yet the hives are gathering in strength, at least judging from the number of foragers on the wing and an occasional look under the edge of the quilts, as it is still too cold to set about spring cleaning, a thing which I never start until the first week of May in any year, sad experience having taught me the danger of too early a disturbance of the brood nest. All the stocks put into winter quarters have answered the roll call, and only one weakling in the lot, an Italian: but it also will be able to give a good account of itself ere the season is far gone. My best is a second cross Carniolan, wintered on twelve combs, now covering ten. Three black stocks on eight and nine combs, with six Italians on seven combs, not forgetting the watchdogs of the apiary, two stocks with a considerable amount of Dutch blood in them, which do their duty by keeping undesirable visitors at a distance. Once someone tried to see how they were getting on, but all the length they got was to get the roof off. They must have had a warm reception, as I got well stung putting it on again. They were under sentence of deposition at the time, but were reprieved on the spot. Such a desirable trait in an out apiary cannot well be dispensed with. Like the others, they are coming along in good style, and while they can *sting* they can also *work*.

Bee forage is fully ten days behind last spring. In the orchards beside my apiaries, there is not a pear tree in bloom, but on May 6 I found the bees working gooseberries and red currants, rhododendrons, white and red, and a tree named *Arbor-vitæ*. It has the foliage of a Spruce; the bark is similar to a Douglas Fir. There is a small red flower on it, and the bees were on the trees in hundreds.

I called the attention of the gardener to the bees working on the trees, and he told me the name. While we were looking at them we found the bees on the rhododendrons, the first time, he said, he had seen bees on them.

To-day, May 7, it is blowing half a gale, but bees are out, carrying in stores. Coming home against the wind, they were found resting on the lee side of hedges, sometimes a quarter of a mile from home. Then, after a brief rest, they set off, cutting the wind and taking all the shelter they could get in the flight for safety.

There have been few losses in the district with Acarine disease, but still a few. Let us hope Dr. Rennie will soon have something to put it at rest.

In the meantime, a spring and autumn spraying with Flavine is my only precaution. But what a pleasure it is, after the winter, to find one's bees alive and well, instead of dead bees and dirty combs.—J. C. A., Grangemouth.

Hints to Beginners.

In Surrey we are on the eve of our second honey flow, and in this quarter our last, and it is coming from the limes and the white clover.

In the localities where there is no heather to fall back upon one has to be careful that stocks do not swarm just when one wants them to send every available bee to the fields for the harvest that will be waiting to be gathered.

My own opinion is that those who seem to suffer so much from the swarming nuisance do not know how to educate their bees into filling supers instead of the brood nest, and this storing of honey below is one of the chief causes of swarming, and once the habit is broken half one's battles are over for the season.

Those who get swarms and empty supers may like to know how this is done.

We usually get here in May a very fair honey flow, and as soon as the supers have enough honey in them to ensure an adequate supply of food for the bees should the weather break, I unlimber the hive, go carefully through the ten brood combs, take away all the combs heavy with stores, and in their place insert drawn-out combs, which I always have by me. These combs I put in the centre, so that the queen can go right on with the egg-laying business. The combs containing *sealed* and hatching

brood next, and then all the combs containing *eggs* and *unsealed brood*.

The idea is as follows: The empty combs in the centre are used at once by the queen to lay in, the combs with sealed and hatching brood are continually supplying empty cells for the queen's further activities, whilst the rest of the combs containing eggs and unsealed brood are so long occupied that they cannot be used for storing honey, and so the bees get into the habit of taking it upstairs to the supers, where it ought to be.

Then every ten days or fortnight whilst the honey flow is on I again unlimber the hive, examine combs to see that no queen cells are raised, and if so cut them out. If necessary I arrange the brood nest on the above lines, and if the whole lot of combs are found at any time to be choked with brood, two are taken out and given to other stocks or nuclei that may need them, and in their place empty drawn-out combs are inserted. As the supers become full another is put underneath, and when the top one is three parts sealed it is taken off, thus keeping the bees always at work. A *wire* excluder is used under the supers, and the bees given plenty of air in the hot weather by raising the front of the brood box and the outer casing.

Of course, most beginners, and many others as well, do not fancy unlimbering a big stock every ten days or so, but it is really quite simple, and the whole job only takes about half an hour, is interesting, and a valuable practical experience.

Where so many seem to fail is in the lack of the knowledge of the *method of life* of the honey bee, and were this more thoroughly studied and grasped there would be success and pleasure where now too often is failure and disappointment.—H. K. SPRINGETT.

New Forest Bee-Keepers' Association.

A general meeting of the members of the above Association was held at Brockenhurst on June 3, with Lt.-Col. Kettlewell in the chair. The attendance was a record one, rather more than half the members being present, which, considering the scattered area covered by the Association, points to a distinct revival of interest in the craft. The hon. secretary, Mr. H. Bright, made the welcome announcement that the Association's membership had been nearly doubled in the preceding twelve months, and that he has just become the owner of a motor-cycle, so that we may expect him to visit us more frequently in the future, and give us the benefit of his invaluable advice. The Chairman informed the meeting that he had had the good fortune to find Mr. J. Herrod-Hempsall in when he called at 23, Bedford Street on June 2, and had learnt from him that his (the Chairman's) suggestion to adopt a Bee Brotherhood badge was likely to bear fruit. The emblem of a pair of clasped hands under the figure of a worker-bee seemed peculiarly apposite, he thought.

Details of the Association's show of bee products to be held on September 16 at Brockenhurst were then discussed and decided.

The meeting terminated with an address by Mr. H. P. Young, the Hampshire County Council bee-keeping expert, who had very nobly sacrificed an afternoon's cricket to be with us, and to whom a very cordial vote of thanks was tendered. Mr. Young is an inspiration, and, if one may presume to say so, a somewhat unusual official in that he knows his job from A to Z. On the whole we felt that this meeting marks the dawn of a new era in the life of our Association, and that at no very distant date this incomparably beautiful part of England may be once again teeming with the millions of bees which garnered their sweets from its fields, gardens and heaths for our ancestors. Though whereas they were content with skeploads of a few pounds in weight, it is our ambition to harvest honey by the hundredweight, nay by the ton, and prove to the public that New Forest honey can compete with the best in the market. H. W. K.

One Swarm from Thirty Hives Last Year.

[10658] Being ill so long I have seen swarm after swarm lost; I was too ill to see to them, but while in bed I was wondering how I could stop them. I thought of putting a rack of shallow frames under the brood chamber, then on top an excluder, on top of that two brood boxes and queen, etc., another excluder, then tier up with shallow frames or sections. I found the bees killed the drones and let them through the bottom excluder. I had them examined now and again to see if there were drones and let them out, but found scarcely any. I am doing the same this year, as I can only just get to the bees after eight months in bed. This tip will be handy to those who have to leave the bees while away at work.—W. GREEN, Laindon.

The Kent Bee-Keepers' Federation.

[10659] Kentish bee-keepers will doubtless feel grateful to Mr. Bryden—to whom they owe so much of their progress—for his admirable restraint. A constructive policy is more worthy of a good man than meeting ingratitude with recriminations.

Doubtless the newly-formed Society, as reported in the JOURNAL of May 11, will only be the first in a chain of new societies to be established this season all over Kent under one central management and one covering name, such as the Kent Bee-keepers' Federation. Its

one aim should be the service of its members in harmony with other bodies, principally in conjunction with the B.B.K.A., and not the service of a few demagogues. I am sure the old Kent Association would never have come to this sad end were it not for the intrigues of outsiders who are making use of the Association for their own gain.—EX-MEMBER.

In a Cotswold Village.

The writer has been enjoying some delightful tramps among the fair villages of the Cotswold. Each day brought not only its change of scene, but its little adventures and pleasant intercourse with men and women at work in the fields and among the fair, famous orchards of that region, and he found much wisdom along the wayside. Passing through one of the most charming of villages, with cottages of greystone, ancient mullioned windows, and picturesque front gables, he noticed just over a narrow brook, which flowed for a mile or more, clear and limpid by the village road, and between it and the cottages, a group of beehives neatly painted in white and green. Working among them was a bent old man of many years, his cheeks ruddy as the apples overhead, and his hands gnarled as the tree trunk. He proved a rustic philosopher with original views concerning everything in heaven and earth. He was a delightful old man, humble, thoughtful, deferent, but certainly reflecting no other people's opinions. He told me he had kept bees for over sixty years, and in his long backward outlook he could see a great change, and for the better, in bee-keeping. Far more people kept bees in Gloucestershire than in his boyhood days. Then, with his half-dozen straw-made hives, he was considered almost a curiosity in the village. In those days the most hard-working bees, those, that is, who had collected the heaviest weight of honey, were smothered each year over a sulphur pit. The weakest and idlest strains were those allowed to survive. There were those, he said, who came and argued with him that the box hives, with their movable frames, were unnatural things for bees, and induced Isle of Wight disease, foul brood, and all other bee afflictions.

ON THE ETHICS OF BEE-KEEPING.

On this the old man poured scorn. "Nay, I tell 'em, it's idle bee-keeping as does that. Show me a lazy bee-man, as keeps bees in any old pot and pan, and troubles hisself about nowt but a gain o' honey, and I'll show you a man who's a centre and beginner of all the nasty complaints as comes to bees. He's a plague spot in his district is that man."

My philosopher had also strong views on the ethics of extracting honey from brood frames. It was a wicked offence, he held, against not only bees who made the honey, but God Who made the bees. Honey from supers was lawful and right. Take that and be satisfied. "Mor'n that marks the greedy man an' what the Scriptur' calls a son of Belial."

Sugar-feeding was also in his category of bee sins. "It it be a bad year for honey, at least let 'em keep what they've gathered. It's their own, ain't it?"

He told me that bar frame hives were almost general in the district, and those who did not use these used the old-fashioned straw skeps which were purchasable at every village store shop in the spring. Boxes were very rarely used.—From the *Sussex Daily Herald*, by REV. A. A. EVANS.

Bee Shows to Come.

A nominal charge of 2s. 6d. is made for notices (not exceeding 7 lines) in this column. 10 lines charged 3s. 6d. up to 15 lines 5s., which covers cost of insertion from order till date of show. Cash should accompany orders for insertion.

June 29, 1922, at Doncaster.—Open Classes for Honey and Wax.—Schedules from F. H. Chafer, 9, Market Place, Doncaster. **Entries close June 19.**

Royal Show, Cambridge, July 4 to 8.—Over £40 in prizes. All classes open.—Schedules and all information from Mr. E. C. R. Holloway, Burwell, near Cambridge. **Entries closed.**

July 19.—Wickham Bishops and District Bee-keepers' Co-operative Association, in connection with Flower Show.—Three classes open to bee-keepers resident in Essex and one class open to residents in the British Isles. Prizes up to £1 1s. Entrance fee 6d. per class.—For Schedules apply, enclosing stamp, to R. A. Pelly, Wickham Bishops, Essex. **Entries close on July 12.**

July 20 and 21.—Lincolnshire Bee-keepers' Association Show of Honey, Wax, Hives, Appliances, etc., at Skegness. Over £30 in prizes. Open and County Classes.—Schedules and Entry Forms from Major J. H. Hadfield, Alford, Lincs. **Entries close on June 19.**

July 22.—Wyke, Normandy and District Horticultural Society's Annual Show. Honey: 5 Classes (Sections and Extracted), Open; Honey: 4 Classes (Sections and Extracted), Local; 1 Class Wax, Open. The Surrey Bee-keepers' Association offers to duplicate all first prizes in open section (Class 86 excepted).—For further particulars and Schedules apply to Hon. Sec., F. G. Kennard, Pirbright Road, Normandy.

July 22, at Mill Hill, N.W.—In connection with the Flower, Fruit and Vegetable Show, under the auspices of Hale and District Allotment Association. Classes for honey and wax exhibits for competition.—Schedules are ready, and may be obtained by sending stamped, addressed envelope to the Hon. Secretary, Mr. A. Bacon, Newbank, Tennyson Road, Mill Hill, N.W.7. **Entries close July 15.**

July 26-27, at Cardiff, Sophia Gardens.—Glamorgan Bee-keepers Association, in connection with Cardiff and County Horticultural Society's Show. Open Classes. Special prizes: Taylor's W.B.C. Hive and Apis Club Bronze Medal.—Schedules from Secretary, Chas. F. Davies, 5, Borstal Avenue, Cardiff

August 3, at Uttoxeter.—Staffordshire Bee-keepers' Association, in conjunction with Staffs. Agricultural Society. Seven silver, six bronze medals, are offered, including B.B.K.A., Staffs. B.K.A., Staffs. Agricultural Society, and Uttoxeter Agricultural Society. Liberal prize money.—Schedules and Entry Forms from W. Griffiths, Solway House, Queensville, Stafford. **Entries close July 15.**

August 31, 1922.—Winchester Domestic Live Stock Association Show. Schedule of Honey Classes Open:—Class 5, one shallow frame:

Class 6, six sections of 1922 honey; Class 7, six 1-lb. screw stoppered bottles of 1922 honey; Class 8, trophy of bee products to be arranged on table space 3 ft. by 3 ft.—Entry Forms to be obtained from M. W. Castle, 80, High Street, Winchester.

September 16 to 22.—British Bee-keepers' Association Annual Show at Grocers' Exhibition, Royal Agricultural Hall, Islington, London.—Schedules from Hon. Secretary, B.B.K.A., 23, Bedford Street, Strand, London, W.C.2. **Entries close certain September 4.**

October 12, at Ongar, in connection with the Ongar and District Agricultural Association.—Extracted and Comb Honey. Open to Essex.—Schedules from G. A. Taylor, Hon. Sec., Ongar and District Bee-keepers' Association, Ashcroft, Ongar.

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One Penny per Word.

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FOR IMMEDIATE SALE, 25 Stocks of Bees on 10, 13 and 20 frames (wired), in excellent hives, with excluders, supers, etc., healthy, £80.—MISS WEAVER, Lansdown House, Weston, Bath. f.68

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SURPLUS SWARMS, Italians, 7s. 6d. lb., carriage paid.—OSBORN, Glenfield, Bideford. r.f.61

LIQUID HONEY for Sale.—GEO. NEAL, Mill Road, Freckenham, Ely. f.94

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SURPLUS STOCKS.—Pure Italian 1922 imported Queens, 10 frames, wired, 60s.; box 10s., returnable.—Box No. 77, B.B.J. Office, 23, Bedford Street, Strand, W.C.2. r.f.100

STRONG joiner-made Hive on legs, takes 12 standard frames, zinc roof, shallow frame super and separate lift, no disease, £1. Seen any evening by appointment.—BENKERT, 17, Girton Road, Sydenham, S.E.26. f.101

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SELL.—Rotax all-brass Motor Car Head Lamps, self-contained acetylene, very powerful, 30s. the pair; two small powerful Acetylene Brass Head Lamps, with separate generator, suitable light car or cycle car, £3 the set; Austin Rear Wind Screen, mahogany framework, £7; Mills' Automatic Acetylene Generating Plant, suitable for 10-roomed house, £6; quantity of Acetylene Gas Brackets and Chandeliers, prices with particulars; small folding Magic Lantern, 30s.; motor cycle all-rubber Ponco, reaches to ankles, wind- and weather-proof neck and sleeves, 50s.; all carriage forward.—HERROD-HEMPSALL, Old Bedford Road, Luton, Beds. c.77

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QUEENS.—Fertile 1922 Italian Hybrids and Carniolan-Italian by return of post, price 8s. 6d. each.—HOSEGOOD, "Beecot," Cliff End, Purley, Surrey. f.82

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IMPORTED ITALIAN QUEENS, 8s. 6d.; also few 8-frame Stocks; lb. screw-top clear Honey Bottles, 30s. gross, free on rail.—HENSLEY, Luton Apiary, Chatham. f.84

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HAS a living enemy of *Tarsonemus woodi* been identified? In other words, has a natural agency for controlling acarine disease been discovered? A startling announcement (illustrated) by an eminent scientific and practical bee-keeper appears in the Anniversary Number (June) of
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4-FRAME Nuclei Travelling Boxes, 6s. each, carriage paid.—LEE, the Beeman, Burgess Hill, Sussex. r.f.99

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ITALIANS.—Nuclei, 1922 imported Penna Queens, 3-frames 32s. 6d., 4 frames 40s., carriage paid; selected 1922 Penna Queens, 10s.; immediate delivery.—ASTBURY, "West Farleigh," Wylde Green, Birmingham. r.f.58

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NUCLEI for Sale, Italians, 28s. and 35s., 3 or 4 frames, young Queen; Hybrids, 25s. and 30s., carriage extra; 6s. 6d. for box, returnable.—A. H. HAMSHAR, Wonersh, Guildford. f.48

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CAMBS. NATURAL SWARMS, as they come, Black Hybrid or Italian, up to June 28 only, 30s.; Italian Bee Stocks, delivery any day from May 29-June 29, 8 frames, £3 15s.—S. H. SMITH, 30, Maid's Causeway, Cambridge. e.71

STRONG NUCLEI, 3- or 4-frame, guaranteed, 30s., 40s., carriage paid; Queens, 7s. 6d., tested.—BUTLER, Vines Cross, Sussex. r.e.25

PURE Italian Virgin Queens, 3s. 6d.; Blacks, 3s. each; delivery in rotation.—HERROD-HEMPSALL, Old Bedford Road, Luton, Beds. f.33

THE finest 4-frame Nuclei procurable, headed by 1922 "Utility" or imported Italian Queen, 35s., carriage paid; box 10s., returnable.—LEE, the Beeman, Burgess Hill, Sussex. r.e.150

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JACK TICKELL.—For Queens, Stocks and Nuclei. List free.—Westbourne Apiary, Cheltenham. r.a.54

FINEST ITALIAN NUCLEI, with Cannell's imported 1922 American Beauty Queens; satisfaction absolutely guaranteed; May, 3-frame 45s., 4-frame 55s.; June, 40s. and 47s. 6d.; carriage paid; travelling boxes returnable.—HOGAN, Boxford, Suffolk. d.71

DUTCH, ITALIANS, HYBRIDS. — 6-frame Stocks, 45s.; 4-frame Nuclei, 36s.; Swarms, 25s.; May delivery; carriage paid.—LEE, The Beeman, Burgess Hill, Sussex. r.d.69

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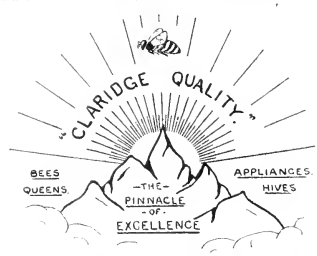

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The W.B.C. Apiary, Old Bedford Road, Luton, Bedfordshire.

The Bee-Keepers' Calendar.

JUNE, 1922

22 Thursday. " . . . . . And overhead
The broad ambrosial aisles of lofty lime
Made noise with bees and breeze from end to end."
Tennyson, "The Princess."

23 Friday. "Let me thy vigils keep
'Mongst boughs pavilion'd, where the deer's swift leap
Startles the wild bee from the foxglove bell."—*Keats.*

24 Saturday. "Green little vaulter in the sunny grass,
Catching your heart up at the feel of June,
Sole voice that's heard amidst the lazy noon,
When even the bees lag at the summoning brass."
Leigh Hunt, "To the Grasshopper."

25 Sunday. "The linden broke her ranks and rent,
The woodbine wreaths that bind her,
And down the middle, buzz! she went
With all her bees behind her."—*Tennyson, "Amphion."*

26 Monday. "And velvety bees in convolvulus bells,
And roses of bountiful Spring,
But I said—'Though roses and bees have spells,
They have thorn and sting.'"
F. Locker Lampson, "A Garden Lyric."

27 Tuesday. "Above the trees the honey-bees swarm by with buzz and boom,
And in the field and garden, a thousand blossoms bloom."
Richard Watson Gilder, "A Midsummer Song."

28 Wednesday. "And then a mist, which hid the ring of eyes,
Swam by me, and a murmur in my ears
Of humming bees around the limes at home,
And I was all alone with you, and God."
Kingsley, "Saint Maura."

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Summer Outing for Bee-Keepers.

Arrangements are being made for a visit to The Hermitage Farms, High Hurstwood, on Saturday, July 8, on the invitation of Mr. and Mrs. Anderson. It is hoped a goodly number of bee-keepers will attend, as Mr. Anderson is sparing neither time nor expense to make the outing a success. The Hermitage is well worth a visit, apart from the apiary and the poultry farm.

Visitors are recommended to arrive

between 12.30 and 1 o'clock, and assemble for lunch at the garage (specially cleared for the purpose) off the Hermitage Drive. It will greatly facilitate arrangements as to catering if they could see their way to take tickets for meals *before* the date, as they must realise how difficult it is for any satisfactory catering to be arranged away from any shops if it is not known approximately how many have to be provided for, and the thing made a success at the lowest cost. The same of course applies to the hire of char-a-bancs or other means of transport. It is assumed most will arrive in this beautiful neighbourhood by road.

At 1 o'clock cold luncheon will be provided for those taking tickets *before* July 1 at 2s. each at tables set out in the garage from 1 to 2 o'clock. If the contractors find it possible they will supply extra luncheons for any not provided with tickets, and these will be sold at the entrance to garage at 2s. 6d. each. Teas to ticket holders (bought before July 1) will be provided from 3 to 5 p.m. at the same place at 1s. per head, and to others it is hoped to be able to supply tea, bread and butter and cake at a counter.

Full particulars as to routes, etc., will be sent to those applying for tickets to The Manager, The Old Hermitage Poultry Farm, Buxted, Sussex.

Jottings from Huntingdonshire

We shall have to mark down 1922 as the year of decamping swarms. It has not been usual in past years for one to hear of swarm after swarm leaving the hive and soaring away for half a mile or more before clustering. Casts, or after swarms, it is true, have often flown off before settling, but it has been the exception rather than the rule. This year, however, almost every beekeeper one speaks to makes the same complaint, "I'm losing my swarms this year." Early this week a swarm from one of my Italian stocks came out and flew for 400 yards, and then settled on the ground, of all places. Shortly after a Dutch swarm issued forth and sailed off quite slowly, the bees were too full to make speed, and ultimately settled on a hedge less than half-a-mile away. Had I not been about at the time both these swarms would have been lost to me. The number of people who have suddenly become beekeepers is remarkable. Well, when a swarm presents itself at one's back door, who can blame the person who is brave enough to domicile the bees if they are unclaimed? The trouble is, most of these renegade swarms are hived in any old box, bucket, or skep, and if they live they live, and if they die, well, there is no loss. Swarms from tree stocks too, are pretty numerous, and strangely enough, while often swarms will leave a well-kept hive and choose a hollow tree for its future abode, those issuing from trees seem to come hovering in the region of one's apiary. Last week I had scarcely finished getting a hive ready for an expected swarm when a distant humming from the neighbourhood of a wood attracted my attention. In a few seconds a swarm appeared overhead 40 or 50 feet up. It then began to spiral down, and ultimately seized upon the empty hive. I left the bees to take possession, but am keeping them under very close observation. Strange swarms coming as a present are all very well, *if healthy;* but if disease is with them they are dear at a gift. Two years ago I wouldn't allow a strange, or shall I say, wild swarm to get within my hives at any price, but as one feels that acarina has spent its force, and remembering that it's the fittest which survive, one hopes that these may be resistant strains of bees domiciled in woods and other wild places which may be of use to profitable apiculture.

Three weeks ago I remarked on the "Daily Mail" publishing a photograph of a man holding a comb of bees at right angles to his body; this evidently caught the eyes of many other beekeepers, anent the editorial remarks on the issue of June the 8th. The rebukes evidently did not reach the pictorial editor of the "Daily Mail," for we have been treated to another picture evidently sent up by one who must be the merest novice in bee lore—possibly both pictures had the same origin. This time we see a swarm of bees entering a hive, so far all right, and it's described as a game of follow my leader; with this we won't quarrel although it is a terminological inexactitude, but when we read that the picture shows thousands of bees following their queen into the hive we complain, as it lends colour to the idea so many people have that bees will not enter a hive until the queen is in. Anyone with a little experience of swarm introduction knows that the queen will sometimes refuse to enter a hive until half or more of her subjects are passed within the portals, and what is more; if half-a-dozen drones are put in a hive first you may take away the queen and still the swarm will march in. Drones are responsible for swarms. Drone trap a hive and you need not fear the presence of queen cells if you are not wanting swarms. On the other hand you can get a swarm to issue without a queen cell in the whole hive, providing there is brood young enough to start queen rearing, in the following manner. Place a rack of shallow frames containing drone comb over the brood nest. Soon this will be full of drone brood; when sealed over place queen excluder over the brood nest. As soon as a good number of drones have hatched out withdraw the excluder so that the brood nest is suddenly augmented with a few scores of drones, a swarm will issue within 24 hours.

Referring to syrup cans as home-made feeders, with holes in the bottom so that the lid may be taken off for refilling. There is no flooding when the lid is removed. The

holes are too small to allow this, and as the lid need only be removed for a few seconds, even if the syrup did flow more freely it would cause no trouble below.

Well, rain has come at last, and how welcome! Although there is a decided drop in the temperature, the bees are working well. The Dutch bees, true to their tradition, worked right through one day although it was drizzling all the time; this is where they score, they will work. I met a bee keeper yesterday who told me with pride that his Dutch bees had not swarmed this year. "I've given them plenty of room, and my, they have worked," were his words. I'm not complaining at my Italians, my Carniolans, my Holmewoods, nor my Hybrids, they have all done well as proved by racks of sections well filled. We've had a wonderful month, if the flow continues 1922 bids fair to be a record honey year, despite its being marked as the year of renegade swarms. The heydey beauty of the briar roses has gone for another year, but the brambles will soon be smothered with flowers. The limes are well ablow, but so far the bees have not elected to visit them in great quantities; there is too much nectar in the fields.—E. F. HEMMING.

Week-End Bee-Keeping.

By S. H. SMITH.

(*Continued from page* 292.)

It did not take ten seconds to convince me that there was no guile in those wholesome and dainty children. They were only repeating words they had heard. And I sensed quickly that they had something on their minds that made them stand in awe of me. An old bachelor must be a pretty poor specimen who can't get on terms with children. Bit by bit, both speaking at the same time, they confessed to having upset the bees, innocently, of course, but with disastrous consequences.

Saturday's rain had continued on Sunday; it had poured and poured and then turned cold. By tea time they were greatly worried about the poor bees, transported far from home into a strange country they knew nothing about. Only a few bees had ventured out to get something to eat. Purely from sympathy they had poured a nice cup of tea, strongly sweetened, into each feeder drawer. The bees had lapped it all up in half an hour. More tea had followed, mixed with all the sugar Freda would let them have. By morning the drawers were empty.

It had rained on Monday until noon, when the sun came out and it had turned warm. Then Freda had hung out the week's wash. And the bees had come, and . . . . and! Freda had tried to drive them away and she had got stung. The clothes had been sent to a steam laundry. There would be ever so much to pay, so they had upset the bees and, maybe, spoilt all the honey. If I said so, daddy would scold them.

It did not take long to reassure them and to put the blame on to the weather. To hide a smile I stooped down and drew out a feeder drawer. It was empty but for a messy, red stain. The other had a yellowish, sticky dab of something that looked like jam. I threw up both arms and looked at the twins.

But the children stood their ground and insisted that bees came in numbers and ate jam when tea was served on the lawn, even ate it off the bread and butter when spread with it; in fact, took it right out of their mouths, as they expressed it.

Regularly at five o'clock bees appeared circling above the rose acacias under which the tea-table was placed, and they had become such a nuisance that tea was now served in the house. Would I tell them to please stay away? I promised to do so, and by the time D. B. appeared, carrying section-racks, the twins and I were friends.

D. B. and I placed the newly-painted hives alongside the bee stocks. As his hands were badly swollen from the stings he had received that morning, he suggested that he should direct the operations pertaining to the division of the bee stocks, and that I should do the work. By doing this now the bees would be telling us where the queens were by the time tea was over. I could then put the queens below, as he had not yet seen this operation performed.

The twins raced to the house to fetch Mrs D. B. In a few minutes the family, veiled and gloved, lined up on a near-by bench, and D. B. was having the time of his life.

No one enjoys himself more than the novice in bee-keeping when he gets the chance of showing his paces in displaying his newly-acquired knowledge before sympathetic spectators. I know several who pay good money to have helpers come and look at and listen to them.

Not to spoil sport I worked slowly, and D. B. took full advantage of this to hand out a choice assortment of comments, such as: "Don't fumble, Week-End. One match should be enough to get the smoker going. Gently, there! Careful with the carbolic cloth, etc., etc." The spectators applauded.

And it seemed to do him good when in withdrawing a frame I got a couple of stings on the back of my hand. He explained matters in detail while the bees turned round and round trying to release their barbed stings. I stood meekly by twisting frames about while he pointed out eggs, larvæ, sealed brood, etc. At last the divided stocks were covered up and the bees left in peace.

I suggested that Freda should lay the tea-table under a laburnum tree about fifty feet from the usual place while the twins and I worked magic to exorcise the bees that were already swooping about hunting for sweets. We requisitioned a couple of white plates from the kitchen. On one we spread a tablespoonful of raspberry jam in the form of the Swastika; the other was treated similarly with apricot jam. We placed these

plates on newspapers, put on chairs and carried them out to the rose-acacia trees. No magic works well without some solemn ceremony, so we joined hands and circled three times round each chair. Before we were through the bees were on the plates.

Mrs. D. B. was a charming hostess. How she guessed it I don't know, but I have a weakness for preserved greengages. They were on the table, and I had my full share. Not one bee came to bother us, and that uneasy sensation had passed away long ago.

After tea we put the queens below. It is a very simple operation with a divided stock. You just subtract one comb at a time from the queen-right part, shaking the bees off into the brood chamber until there are only three combs left. Seven frames of foundation take the place of the subtracted combs. An excluder is put on and the subtracted combs are placed in another brood chamber put above the excluder, frames of foundation filling up the space left. The brood chamber with the uneasy bees goes on top.

If the queen put below is good, young and vigorous, this operation is equivalent to swarming in the hive, and the bees quickly draw out the seven combs for her to fill with eggs. If the queen is old and failing, her incapacity is shown by the few combs the bees draw out, and it is up to the beekeeper to take measures to replace her.

(*To be continued.*)

Derbyshire Notes.

What a wonderful change has come over the country in four short weeks. I remember that four weeks ago I indicated what a bad time it had been for bees, but ventured to prophesy better weather for the future. And we have had it—four weeks of scorching days, with the thermometer at times well over 80 in the shade. Two months of growth seem to have been packed into one. A month ago damson and plum bloom were scarcely out. Now they have gone, making acquaintance with the pear blossom before they disappeared, and apple and sycamore, too, have come and gone. And now the hawthorn is in full bloom, and will soon be fading away, and I am looking out for my first white clover head; we have had the red for a fortnight or more. It scarcely seems possible that such things can happen so quickly. Nature has taken to American methods, and has begun to bustle after her laxity and slowness in the early months. But what of the bees?

So far as I can judge, although the bees have made rapid strides (I don't like the word "strides," so will substitute "progress") they have not been able to crowd two months' work into one. I believe that even in this wonderful weather it still takes three weeks to mature the perfect bee from the time the egg is laid, so that they are somewhat behindhand. My stocks were weak in brood a month ago. Now they are becoming really strong, but the early blossom honey is nearly finished, and I have but little in the supers.

I do not think that a short, sharp time such as we have had is quite so good for the bees as one more drawn out, at any rate, with a decent time in April, so that bees can develop a full brood nest.

As to swarms, I have had none, though some stocks are now at swarming point, but a fortnight ago whilst visiting a friend, the Chairman of the D.B.K.A., I helped him to hive one. It was on Sunday, too. As we sat talking bees, and whilst he was informing me that he did not expect too much this year as the only stock he had was building up from a last year's nucleus, his wife came running in, crying: "The bees are swarming."

Well, to cut a long story short, I annexed a queen cell when we looked through the old stock. This I put into a match-box, and carried home inside my shirt to keep it warm. I made up a nucleus at home and put in the cell. It hatched on the following Monday week. But what a queen! When I looked for her I could not find her in the nucleus. I tried several times without success. Then on the following Friday I saw her on the alighting board trying to fly. Each time she attempted it she rolled off. I picked her up several times, but she fell again. I took her home for further examination. She was a miserable object, scarcely larger than a worker, nearly black and hairless, with deformed wings and an indentation on her thorax as though another bee had hit her with a hammer, and her wings were deformed. Still, with all these deformities she had bravely tried to carry out her duties to the race. Now, I wonder why she was so poor. Was it caused by being carried about for an hour or two, and had she had a chill which had arrested her development? One for you, Mr. Editor. If I had not taken her, and supposing that she had been the first to hatch in my friend's stock, would she have been a perfect queen? [We don't know.—Eds.]

I want to ask a question. Do bees gather from the hawthorn? I know that a negative statement proves nothing in this case, but I am going to make it. I have never seen bees on hawthorn. Although we just now have a wealth of blossom out I see no bees working it. Yet only a day or so ago a friend from further south in the county said that in his district the blossom was black over with bees. Is it that I am a poor observer or what? In this matter one positive statement from a man who has seen bees working a certain flower is worth a thousand negative ones from those who have not. But am I alone in this? [For some reason bees are very capricious in working hawthorn bloom. Ours were working on it this year. Last year only one bush appeared to attract them. It was a-hum, but all the rest were practically deserted.—Eds.]

My boy of thirteen is becoming rather a

keen bee-keeper, and is anxious to help and to learn all he can. Naturally, I am pleased that it is so. But stings make sad havoc with him. The other day he took one on the forehead; of course, he ought to have had a veil on, and I cannot just say now why he had not. That was in the evening. Next morning he was scarcely recognisable even by his most intimate acquaintances, and he appeared to have a slight fever. The chief solace to him was two days' holiday from school. Even when he returned there he was not quite normal, and his teachers wanted to know what he had been doing. A day or two later a sting on the back of his hand swelled his hand and arm up to the elbow. This time there was no holiday, but as he could not use a pen he managed to escape a little of his school work and nearly all his home lessons. He finds, you see, that everything has its compensations. Now, what I wonder is whether he will ever be able to handle bees with safety. I know I used to swell a bit when first I was stung, but nothing like so badly as he does. Then, again, in a district where I am trying a little to popularise bee-keeping, what an advertisement it is to have him going about with a head the size of a bucket. You see, I am in a quandary. What must I do?—D. WILSON.

North Cheshire Chat.

PRICES OF HONEY AND APPLIANCES.

In a former note I made reference to the price of honey. As I then remarked, I think we have to learn how to produce honey as cheaply as our competitors; the ones mostly to be feared are our kinsmen in Australasia. They can, and do, produce excellent honey which finds its way into our markets, and is retailed at prices lower than has obtained for English, or perhaps in this case I should say, British. The variety in which the competition is keenest is white clover honey, of which New Zealand can produce excellent samples. Heather honey can take care of itself. We have to learn how to produce in greater quantities, and more cheaply if we are to get honey used as it ought to be as a food, and not, as it largely now is, as a luxury. The poorer people in the towns cannot afford to pay 2s. or more per lb. for a food of this class; indeed, I could not myself, if I were not a producer. I think we ought to aim at being able to produce honey at not more than 1s. per lb. retail. I agree that with the present prices of appliances, etc., this is hardly possible. In pre-war days it was possible to produce at sixpence per lb. and show a good profit per hive; indeed, a large commercial producer once told me he would be satisfied if he averaged 5d. per lb. That was from the native bees, which do not yield such large quantities, as the more prolific foreigners under the most modern intensive management. The price of bees is already coming down, *vide* advts. in "B.B.J." Bee-keepers ought to combine to get the cost of appliances down a big piece. Captain Dutchman, in the issue of "B.B.J." for May 4, gives a summary of prices, which is illuminating. If, as I have no reason to doubt, his example of sections being bought direct from America at a saving of more than one-third is correct, I would suggest that a co-operative society of bee-keepers for dealing in bee-goods might be started with great hope of success, or the various associations might purchase these goods and distribute them to members. They could make a good profit and still sell to members much cheaper than they can now obtain them.

In last week's editorial the Editor gives the retail price of English honey as 1s. 9d. to 2s., and sections 2s. 6d., presumably in London. I would not like to pay so much if I were a buyer. I think that 1s. 6d. for extracted and 1s. 9d. for sections a good price. (Please note that I have not a quantity of old honey to sell.) If selling wholesale, 25 per cent. to 30 per cent. off these prices. I believe in a very few years' time prices will rule below 1s. per lb. We want to encourage more people to keep bees, but we want to warn them that the days of abnormal profits from bees are probably gone, and that they must be satisfied with moderate profits, as they would be from their poultry for instance.

I have known many cottagers induced to invest a few pounds in hives and bees, because they had seen in some paper that someone had made £10 out of a stock in one season. Such things happen, but they are not normal. The *average profit per hive* is what ought to be published. Somebody made £25 of a pure bred cockerel, but that is not a reason why everybody should think they could make a fortune out of poultry. Let us have the view of readers of "B.B.J."—D. J. HEMMING, Appleton, Warrington.

Bees Mistaken for "Wopses."

On May 15 last, on her arrival at a country house in one of the Southern Counties a lady friend of mine was informed by her worthy host that, on the previous day, "a great swarm of wasps" had clustered on his verandah-trellis, thereby causing the occupants of the villa no little alarm. "Wasps never swarm," observed the aforesaid intelligent lady: "What happened?" "We suffocated the lot with poisonous fumes," was the reply. When taken to the scene of the recent massacre the lady visitor discovered, to her horror, that the "swarm of wasps" had consisted of a strong and early swarm of golden-girted Ligurians.

For a' that, "A swarm of bees in May is with a load of hay" . . . So saith, yours sorrowfully.—AN OLD BEEMAN.

June 14, 1922.

Honey Labels.

Can any of our readers give a correspondent the name of a firm who will print honey labels at a reasonable price? If so, we shall be pleased to hear from them and forward the information.

John Geddy, of Hilltown, Falkland.

By Lieut.-Col. H. J. O. Walker.

(*Continued from page* 267.)

In 1697 Gedde, who had prepared a fresh and enlarged edition of his book, entrusted it for publication to Richard Swalden, a joiner, at that time his agent in London. By oversight, or for some unstated reason, it also was termed the third edition.

Now advanced in years, he was residing on his estate at Falkland, and Swalden describes him as "an ancient gentleman of the Scotish nation" who has desired him "to make an Apology for the Impropriety of his Stile . . . . but of this Dialect the Author (for the love he bears to his native country) is very tenacious." Although the title is changed, the greater part of the treatise follows the text of the former editions, the chief exception being that Gedde no longer gives the figures and dimensions of his colonies, "because the same was done by me in two former books, and at large in Moses Rusden's book, and are to be seen in many places in England, Scotland and Ireland . . . . and sold at every market Town or Shire-Town in most Shires and Counties of the Kingdoms."

The preface states that on the death of Charles II., in 1685, Gedde obtained from his successor, James II., a renewal of his patent for a yearly payment of 20 lbs. of wax to the Crown, "but because of the iniquity of the time and the iniquitous laws and oaths that was prest upon every one that should pass any gift or grant from the King through the Seals, all those years the said John Geade could not effectuate his business, because he would take none of these oaths, and was hotly persued for his not complying with the courses of that time, which necessitated him, his wife and family, to abandon his native country until King William's accession to the Throne, to whom he made application for the confirmation of the said gift."

Elsewhere he says, "because I would not comply with the English and subscribe their oath called the Tender." Whether he obtained his wish on King William's accession, or how much longer he lived or where he died, is not recorded.

Gedde was a very able bee-master. In an age when swarming was foolishly encouraged and bees habitually destroyed every autumn he had the discernment to advocate the following sound principles of bee-keeping:—

(1) That to destroy bees was criminal folly; (2) that swarming, except for desired increase, was pernicious; (3) that the chief cause of swarming was want of room in the honey season; (4) that the most profitable hive was one which could be built up vertically in separate compartments, to be added or removed as necessary, and that these should contain a movable framework to hold the combs. His method, then new, of transferring a colony established in a straw hive to his wooden boxes still remains the best.

The transparent octagon was adopted successively by Warder, without due acknowledgment, 1712, etc., and Thorley, 1744, with whom it reached its full glory. In England it then fell gradually out of use, but not in Scotland, where, modernised by Robert Kerr, of Stewarton, in 1819, and bearing the name of that town, it retained its popularity until gradually superseded by the frame hive that must be always associated with the name of the American bee-keeper, Langstroth.

It remains to be considered whether the hive patented by "John Gedde, inventor," was the first of its kind, and, if not, to whom we should rightly attribute the honour of invention; a point of hot debate in the first and second volumes of the British Bee Journal, but not properly settled owing to lack of information.

The facts are as follows, and I give them the more gladly because in "B.B.J.", May 2, 1901, I myself, for lack of full knowledge, did Gedde some injustice. In "The Reformed Commonwealth of Bees," presented in several letters and observations to Samuel Hartlib, Esq., London, 1655, pp. 3-8, there is a figured description of "The new Bee Hive . . . . left for a Farewell to his Native Country by that zealous, publick hearted and learned gentleman, Thomas Brown, Dr. in Divinity and of the Civil Law." Like Gedde's, it is built up vertically in compartments, each containing a framework, though less elaborate, for the combs. The compartments are round, not octagonal. Each has a roof provided with a passage hole, and has two handles for lifting.

On pp. 41-46 are two letters, dated 1653, from Mr. William Mewe, minister at Easlington in Gloucestershire, briefly describing his transparent hives. "If you desire," he writes, "the model or description I shall give the same to you that I did to Dr. Wilkins, Warder of Wadham, who hath with great curiosity set one up in his garden and, as I hear, is setting up another with augmentations."

On p. 50 is "A letter concerning that pleasant and profitable invention of a transparent bee-hive, written by that much accomplished and very ingenious gentleman, Mr. Christ. Wren, with the figure and description." This hive is octagonal, in three vertical compartments, intercommunicating by means of a round hole in the top of each, closable by a board or cover "turning upon a pinne." In the rear side, opposite to the entrance, a door, within which was a "piece of cleere glasse, close cemented to the inside of the box, to look in upon occasion"—hence the transparency. The letter is dated All Soules College, February 26, 1654, and Mr. Wren desires further light in this business, "for as yet, you see, ours is imperfect."

The writer grew up to be one of England's great men, better known as Sir Christopher Wren, the architect, who, after the Great Fire in 1666, designed St. Paul's Cathedral and other public buildings, and, had he been permitted, would have made the new London a fair and spacious city. At the date of his letter he was twenty-three, and intimate with the Dr. Wilkins mentioned above, afterwards Dean of Ripon and Bishop of Chester. Probably it was with the Doctor's hive that the two friends had been experimenting. That

summer, 1654, John Evelyn visited the Doctor at Oxford, and July 13 met "that prodigious young scholar, Mr. Chr. Wren, the visit being thus recorded in the famous diary: "We all dined with that most obliging and universally-curious Dr. Wilkins at Wadham College. He was the first who showed me the transparent apiaries, which he had built like castles and palaces, and so order'd them one upon another as to take the honey without destroying the bees. These were adorned with a variety of dials, little statues, vanes, etc., and he was so aboundantly civil finding me pleased with them, to present me with one of the hives which he had empty, and which I afterwards had in my garden at Sayes Court, where it continu'd many years, and which His Majestie came on purpose to see and contemplate with much satisfaction."

(*To be continued.*)

British Bee-Keepers' Association.

The monthly meeting of Council was held at 23, Bedford Street, Strand, London, W.C.2, on Thursday, June 15, 1922.

Mr. W. F. Reid presided, and there were also present: Mrs. M. K. Hodson, Miss M. Whyte-Johnstone, Miss M. D. Sillar, Messrs. W. H. Simms, G. J. Flashman, W. E. Moss, G. Bryden, A. Richards, F. W. Watts, J. B. Lamb, J. Herrod-Hempsall. Association representatives: C. M. J. Winn (Essex), E. G. Waldock (Surrey), E. Ff. Ball (Bucks), R. R. Babbage (Middlesex).

Letters of regret at inability to attend were read from Messrs. G. R. Alder, W. E. Hamlin, C. L. M. Eales, Sir Ernest Spencer, and Rev E. F. Hemming.

A vote of sympathy was passed to Mr. C. L. M. Eales in his serious illness, with a wish for his speedy recovery.

The minutes of the previous meeting were read and confirmed.

The Wiltshire Beekeepers' Association applied for affiliation and were accepted.

The following Associations nominated delegates, and all were accepted:—Cheshire, Hertford and Pembroke.

The report of the Finance Committee was presented by Mr. Bryden, who stated that payments into the bank for May were £52 1s. 9d. Payments amounting to £80 9s. 5d. were recommended. The bank balance on June 1 was £268 1s. 4d.

The Report on the Final Examination was presented, and it was resolved to grant certificates to the following:—Mrs. B. Pond, Misses S. Crowe, Ella de Son Taylor, B. Flower, D. Mills, E. W. Jameson, M. D. Sillar, Messrs. J. A. Claxton, J. E. Pinder, J. Evans, M. Comery, E. C. Hipkins, J. Barrett, B. G. E. Knight, E. A. V. Willett, J. Pickston, J. W. Eggleston.

Reports on Preliminary Examinations held in Surrey, Devon and N. Devon were presented, and it was resolved to grant certificates to the following:—Mrs. M. A. Mumford, Mrs. R. C. Beechens, Mrs. V. V. Yonge, Misses M. Collard, C. L. Peck, B. Heal, L. K. Herring, E. J. Reeve, F. E. Anderton, Rev. J. Morley Davies, Messrs. J. Fooks, A. Longley, E. Sleet, P. J. Welch, E. S. Williams, R. Beck, M. Finch, E. Frost, E. J. Sanger Tucker.

Next meeting of the Council July 25, 1922, at 23, Bedford Street, Strand, London, W.C.2.

Bee-Keepers' Conference at Marseilles.

An international conference of bee-keepers will be held at Marseilles on September 18, 19 and 20. Will any bee-keepers in Great Britain who intend going kindly communicate with the Hon. Secretary of the British Bee-keepers' Association.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real name and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

Beginners' Experiences.

[10660] Hoping that others may follow my example I venture to give you a short description of the progress that can be made by a stock of bees even though their owner knows practically nothing about their proper management.

I trust that some of your readers will relate their experience, whether it be of disease, failure, or success, for I feel sure such accounts would be of more general interest than, say, the short accounts which you give of the various county association's meetings.

On some date, about May 14, a friend asked me to hive a swarm for him. On the way to his house he was telling me the history of the parent stock. It had swarmed last year (the swarm being lost), so had a young queen; he had not examined it at all, neither had he fed it. I hived the swarm—a medium-sized one, placed it on three combs of brood taken from the parent stock, and completed with frames of foundation.

At my friend's request I placed two supers of shallow frames, also filled with foundation, on top; I told him, of course, that this was giving them too much room; however, he insisted, and on they went. At my urgent request he allowed me to add newspapers to the rather scanty quilts. About three weeks since he had a cast, and he tells me that the hive he placed it in is

now full of brood and honey. The swarm itself swarmed yesterday, the queen cells were cut out and the swarm thrown back: at the same time, one of the boxes of shallow frames containing 40 lbs. honey was removed, the other, though full, was not quite sealed over. From a stock that has received no attention whatever in the way of feeding or otherwise (I found a round, unused tin feeder over the hole in the quilt when I took the three combs of brood, and the covering on the top of the frames was none too warm), two swarms, a maiden swarm and 80 lbs. of honey is not a bad record by June 12, even in this year of sunshine.

My own stocks have not done so well as this, though I think three or four of them must have gathered 100 lbs., or even more, which is quite good, considering how late the spring was for North Wales. What, by the way, is wrong with Sycamore honey that Mr. Hemming expresses the hope that it may be fed to the young bees or stored in the brood chamber?—W. W., June 13, 1922.

[The flavour and colour of Sycamore honey are not at all nice.—EDS.]

Bees Killed by Nectar in Lime Tree Flowers.

[10661] Every beeman realises the value as bee-forage of the common lime tree (*Tilia europæa*). It provides a useful flow of nectar in some localities when other sources fail. A friend of mine, however, has in his garden a large specimen of what seems to be called the "weeping lime," and he asserts that its bloom is positively poisonous to the bees. When in flower, he says, it is quite common to see scores of dead or comatose bees strewn on the ground beneath it. He has tried several stocks of different variety, and in each case the stock has "gone under" in late July or early August, just about the time the "weeping lime" is in flower. Can you, or any of your readers offer any explanation or cite a similar instance?—W. A. REES-JONES, Garmon Villas, Mold, Flintshire.

[It is not at all unusual to find bees dead, or unable to fly, under lime trees, but so far as we know no satisfactory explanation as to the cause has been found.—EDS.]

Bee Shows to Come.

A nominal charge of 2s. 6d. is made for notices (not exceeding 7 lines) in this column, 10 lines charged 3s. 6d. up to 15 lines 5s., which covers cost of insertion from order till date of show. Cash should accompany orders for insertion.

June 29, 1922, at Doncaster.—Open Classes for Honey and Wax.—Schedules from F. H. Chafer, 9, Market Place, Doncaster. **Entries close June 19.**

Royal Show, Cambridge, July 4 to 8.—Over £40 in prizes. All classes open.—Schedules and all information from Mr. E. C. R. Holloway, Burwell, near Cambridge. **Entries closed.**

July 19.—Wickham Bishops and District Bee-keepers' Co-operative Association, in connection with Flower Show.—Three classes open to bee-keepers resident in Essex and one class open to residents in the British Isles. Prizes up to £1 1s. Entrance fee 6d. per class.—For Schedules apply, enclosing stamp, to R. A. Pelly, Wickham Bishops, Essex. **Entries close on July 12.**

July 19 and 20.—Warwickshire Bee-keepers' Association, in connection with the Warwickshire Agricultural Society's Show at Nuneaton. Open Classes for Honey, Wax, Hives and Bee Appliances.—Schedules from Secretary, Geo. Franklin, Burton Green, Kenilworth. **Entries close July 10.**

July 20 and 21.—Lincolnshire Bee-keepers' Association Show of Honey, Wax, Hives, Appliances, etc., at Skegness. Over £30 in prizes. Open and County Classes.—Schedules and Entry Forms from Major J. H. Hadfield, Alford, Lincs. **Entries close on June 19.**

July 22.—Wyke, Normandy and District Horticultural Society's Annual Show. Honey: 5 Classes (Sections and Extracted), Open; Honey: 4 Classes (Sections and Extracted), Local; 1 Class Wax, Open. The Surrey Bee-keeprs' Association offers to duplicate all first prizes in open section (Class 8½ excepted).—For further particulars and Schedules apply to Hon. Sec., F. G. Kennard, Pirbright Road, Normandy.

July 22, at Mill Hill, N.W.—In connection with the Flower, Fruit and Vegetable Show, under the auspices of Hale and District Allotment Association. Classes for honey and wax exhibits for competition.—Schedules are ready, and may be obtained by sending stamped, addressed envelope to the Hon. Secretary, Mr. A. Bacon, Yewbank, Tennyson Road, Mill Hill, N.W.7. **Entries close July 15.**

July 26, 1922.—The Honey Show of the Wallop Horticultural and Floral Society have District and Open Classes for Sections and Extracted Honey.—Apply for Schedules to Mr. P. E. Roberts, School House, Nether Wallop, Hants.—**Entries close July 19.**

July 26-27, at Cardiff, Sophia Gardens.—Glamorgan Bee-keepers Association, in connection with Cardiff and County Horticultural Society's Show. Open Classes. Special prizes: Taylor's W.B.C. Hive and Apis Club Bronze Medal.—Schedules from Secretary, Chas. F. Davies, 5, Borstal Avenue, Cardiff

August 3, at Uttoxeter.—Staffordshire Bee-keepers' Association, in conjunction with Staffs. Agricultural Society. Seven silver, six bronze medals, are offered, including B.B.K.A., Staffs. B.K.A., Staffs. Agricultural Society, and Uttoxeter Agricultural Society. Liberal prize money.—Schedules and Entry Forms from W. Griffiths, Solway House, Queensville, Stafford. **Entries close July 15.**

August 23, at Bartley Cross.—New Forest B.K.A., in connection with the New Forest Agricultural and Horticultural Association. Open and Local Classes for Honey and Appliances.—Schedules from Mr. W. Cooper, Marley House, Netley Marsh, Southampton. **Entries close August 6.**

August 26, at Hinckley, in connection with the Hinckley Sweet Pea and Rose Society's Annual Show.—Open to all bee-keepers. First prize, 12s. 6d.; second price, 7s. 6d.; and third prize, 4s.—Schedules are ready, and may be obtained by sending stamped, addressed envelope to the Hon. Secretary, A. Kimbrell, 119, Clarendon Road, Hinckley, Leicestershire. **Entries close August 21, 1922.**

August 31, 1922.—Winchester Domestic Live Stock Association Show. Schedule of Honey Classes Open:—Class 5, one shallow frame: Class 6, six sections of 1922 honey; Class 7, six 1lb. screw stoppered bottles of 1922 honey; Class 8, trophy of bee products to be arranged on table space 3 ft. by 3 ft.—Entry Forms to be obtained from M. W. Castle, 80, High Street, Winchester.

September 9.—Middlesex Bee-keepers' Association, in conjunction with the Brentford Allotments Association Annual Show, at the Wesleyan School Hall, Clifden Road, Brentford. Twelve Open Classes for Honey, Wax, etc.—Schedules and Entry Forms from R. R. Babbage, 33, Whitestile Road, Brentford, Middlesex.

September 16 to 22.—British Bee-keepers' Association Annual Show at Grocers' Exhibition, Royal Agricultural Hall, Islington, London.—Schedules from Hon. Secretary, B.B.K.A., 23, Bedford Street, Strand, London, W.C.2. **Entries close certain September 4.**

October 12, at Ongar, in connection with the Ongar and District Agricultural Association.—Extracted and Comb Honey. Open to Essex.—Schedules from G. A. Taylor, Hon. Sec., Ongar and District Bee-keepers' Association, Ashcroft, Ongar.

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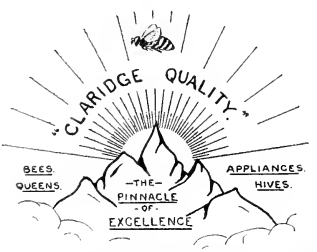

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The Bee-Keepers' Calendar.

JUNE, 1922

29 Thursday. ". . . First the lime,
(I had enough there of the lime, be sure
My morning dream was often hummed away
By the bees in it)."
E. B. Browning, "Aurora Leigh's Garden."

30 Friday "That orbed maiden, with white fire laden,
Whom mortals call the moon,
. . . . . .
The stars peep behind her and peer;
And I laugh to see them whirl and flee,
Like a swarm of golden bees."—*P. B. Shelley, "The Cloud."*

July

1 Saturday "A swarm of bees in July
Is not worth a fly."

2 Sunday "God of the granite and the rose!
Soul of the sparrow and the bee!
The mighty tide of being flows,
Through countless channels, Lord, from Thee." *L. Doten.*

3 Monday "But something louder than a bee's demur
Before he lights upon a bunch of broom."
T. Hood, "Midsummer Fairies."

4 Tuesday "Music, sweet music, cheers meadow and lea;
In the song of the blackbird, the hum of the bee." *Anon.*

5 Wednesday "Only the bee, forsooth,
Came in the place of both,
Doing honour, doing honour
To the honey-dews upon her."
E. B. Browning, "A Lay of the Early Rose."

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Seasonable Hints.

Honey is not coming in so freely since the break in the weather. In our district white clover looks like being a failure. The drought last year and again this spring appears to have killed much of it. Swarms and nuclei should be attended to so that they do not suffer from lack of food. Colonies that are queen rearing should be fed if wet or cold weather pre-

vents the bees from foraging. Good queens are never reared by a half-starved colony. Keep up the water supply, for bees need a lot during the summer. Our own were apparently working hard on the ivy covering a wall; investigation showed it was the water left on the leaves by an early shower, as soon as that dried up there was not a bee on it.

A Dorset Yarn.

"And through this distemperature we see the seasons alter——"

In a previous yarn I mentioned the drones laid out dead on the alighting-board. The cold nights of the week ending June 17 have seen a great many more of them settled off. This year of intense heat, and then so cold, one cannot but think it was the same when Shakespeare wrote in "A Midsummer Night's Dream":—

"When we see the seasons alter: hoary-headed frosts fall in the lap of the crimson rose."

Our bees two mornings this last week left the top of surplus racks beneath the glass covering. I had seen them the day previous in crowds beneath the glass; cold drove them downwards. Then the drones got in the way of these little communist workers, were then killed off and dragged out on the front. Yet the warm sun on the 16th and 17th brought them all up to the top again. It was very cold in Dorset; bees did not do much the first part of the week, but made up the latter part. The greater number are without pollen on their baskets, so must infer that honey is being harvested freely. Again, this Sunday morning (18th) it was very cold and bees did not get out early. Quite close to the hives are some robinias, large trees with their large racemes of pea-like flowers. These have been a great attraction to them; they are always in bloom when the strawberries are ripe. It seems strange that these robinias should be so attractive to bees. The wistarias, though larger and more beautiful and the same pea-like flower, have not near the attraction to them. In the fields of uncut grass are many composite flowers, most of them with a bee on them, but the wild white clover seems to be very poor—at least in our fields. Now that the red Trifolium incarnatum is cut, the clovers are very scarce, save only the lotus clovers with yellow flowers.

Was with a farmer in the Blandford area yesterday who owns about two square miles of the best Dorset land, but the wild white clover was very poor and sickly-looking. He has four dairy farms, large herds of deep-milking cows, water laid on into every field. He keeps a record of the milk given by every cow in all four dairies. His bees died while he was out with the Dorset Yeomanry in the war (he won a commission on the field), and had never had good results with his fruit trees since. He has now started bees again; he asked me to see them; he said there were not so many bees in and out of the hive. Taking out the combs I found there was no queen, but seven ripening queen cells. They had swarmed while he was away at market. His stock was very strong, with thousands of young bees biting their way through the capped cells. He will not be troubled with any more swarms this season. They were the most gentle lot of bees I have ever handled, even though he has them in a small copse away from his young children—the only stock of bees in two miles of land. They were in good feeding-grounds; they were bent on colonising the area with bees; that swarm had found some hollow tree and made a home, but they will not give the farmer honey.

Quite a lot of bee-keepers have lost swarms from bar hives this season. One of them told me they had only queen cells not yet capped over, and yet they went out without his notice. It must have been the great heat with so many bees drove them out. We had a lot come out of one of the "blacks," flew round and round, then fastened on a hive on the right front, all streamed in, all were received with gladness by the other hybrid stock; both hives were black (tarred). Am inclined to think it was a young queen out for mating and entered the wrong hive after, as they never clustered at all. I was there all the time and expected to see fighting, but there was none. This was a Wednesday. After two days of cold winds she took a favourable time to mate, a lot of bees going with her. There was not even a dead queen thrown out of the hive that was entered.

June 25.—Regret, Mr. Editors, this did not get off for last week. With so much to do it was impossible to finish. Bees are not adding to the surplus so much as one would wish, especially sections, but standard combs are steadily being filled. When sections were given on the same day and standards on another, the former were not even started during the week, but the standards were all started and quite weighty with honey. On looking in the brood chamber, honey was being filled in empty cells among the brood with the section lot, but where the standards had been placed honey was not placed below. One lot, which had sections on all the winter, was given a box of standards early, the rack of sections still kept on top all full. Early June another box of standards was given them on top of the other two, the rack of sections still placed on top. On looking at them this last week, the whole of the combs in the third box were filled but not all capped, the two lower ones had brood in all. These had not swarmed, but must have requeened themselves, as the bees are losing the yellow bands. Many of them are brown, only showing a light mark at the articulations of abdomen. Another lot had a box of bars, some with drawn-out comb, and some with foundation placed beneath the brood nest at the same time. Bees left the top lot of standards for a week, but were filling them again after that time. All of these are strong, and Saturday evening, after a damp day, at 6 p.m., when sun shone they came out in such crowds it was like swarming time. So many had been kept close all day,

they took a hasty run for the moisture that was everywhere. It had rained all the afternoon; had only just reached home from Poole Park, where we had arranged for a bee demonstration and lecture by my friend Mr. Geo. Dance at a great British Legion gathering. In East Dorset bees do appreciate rain water, especially as it is warmed by the sun. Our bees were on the gravel roads for the moisture, a proof that water must be within reach of bees always, or they will fly off to the brooksides for it, and if this is a distance from the hives one will lose a lot of surplus.

Mr. Geo. Dance thinks Portugal Laurels, that are now in blossom, do not give a good flavoured honey (it must be pleasant to the taste if you want to sell to the same clients again), yet bees must get a lot from these huge trees of Portugal laurels. At South Lycett they are 20 ft. high and covered with flowers, the perfume of them reaching a great distance. This, with the sweet chestnut, he wishes bees would not gather, but bees seem to gather anything that is sweet. His surplus racks are full of honey; he tells me sections sold in Wareham Market for 1s. 8d. each last week. The glass houses were heavily cropped with grapes and peaches, tomatoes and cucumbers; his plum trees heavily weighted with fruit Victoria's are regular croppers, but Kirk's Blue is as heavy with fruit as Victorias. Lateness of blossom and plenty of bees has given him heavy crops. Another fruit grower was over to-day, the 25th. His plums are a poor crop; he concluded it must be the bees that have made ours so much better. He is going to have 2 stocks with sections at £5 each; that will be another bee-keeper in East Dorset.—J. J. KETTLE.

Jottings from Huntingdonshire

The question of bee stings is an interesting one. Although the tongue rather than the sting is the bee's business end, there is no doubt that the sting of a bee is responsible for some suffering among the apiculturists. No one knows exactly what effect an injection of formic acid will have upon one's flesh until they have experienced it, and the worst of it is no would-be bee-keepers are anxious to test the character of their blood whether it does or does not contain antidotal powers when formic acid is pumped into it. Some people's flesh swells quickly when stung and causes great pain; others have the swelling and discomfort without the pain. Some flesh again will swell up and subside in an hour. Some swells up and refuses for two or three days to subside. Then there are those people on whose flesh at the time a sting appears to have no effect, but on the day following are plagued with an intolerable itching. Again there are people who, after a sting, find their whole body covered with goose flesh. Some after a dozen stings are inoculated, and further punctures are little more than felt; others can be stung daily and still the stings take effect. A few people (happily only a few) are prostrated as the result of a sting; these should not keep bees; and a few are those happy individuals on whom the sting has no effect neither on the day or in the days to come. For myself, I should imagine I am like Mr. Wilson's boy. A week ago while among the bees I got a sting just above the right eyebrow; in an hour my eye was closed and my cheek considerably larger than nature intended it should be, and this despite application of ammonia (I should say the formic acid had a few minutes' start). It perhaps served me right for not having a veil. I generally use one, but on occasion run the risk. Although I get scores of stings left in my hands during a season my flesh still swells quickly and abnormally unless an antidote is applied immediately after the injection. I find that if the antidote is applied beforehand much trouble and pain is saved. Rubbing one's hands well over with dilute liquid ammonia or washing them in warm water in which soda has been dissolved, before going among the bees, in my case has the happy effect of neutralising any poison which bees may endeavour to inject into them. But don't do this to your face unless you want to renew your skin. If one is stung unawares and swelling takes place there is nothing better than lead lotion to restore the swollen part of one's anatomy to its normal proportions. Bees are nothing if not observant; they get to know their master both by sight and smell. I get more stings in examining bee colonies of fellow beekeepers than I do manipulating my own. I once went through twenty stocks in one day and got only one sting; the day after I went to look at a single stock of a neighbour and got easily a dozen stings. I should say the weather on each day was identical. When thundery unsettled weather rules the day, the temper of foraging bees is tried to the utmost, and if one gets stung on such a day small blame to the bees. I heard a demonstrator once say, "Smear your hands with honey before you open up your hives and you won't get many stings, and if you do they won't hurt." I have noticed that if by chance a little honey gets on my hand and a bee stings in that particular spot, there is little after-effect. But fancy manipulating bees with honey-smeared hands. Ugh!—E. F. HEMMING, Steeple Gidding.

The "Royal" Show.

[10662] Through your hospitable columns may I cordially invite all bee-keepers to meet at Cambridge on the Thursday in Royal Show week for a conference? Time and place will be posted at the Bee and Honey Tents. A postcard from all likely to attend would be appreciated.—Thanking you in advance, yours faithfully, E. C. R. HOLLOWAY, Hon. Sec. Cambs. B.K.A., Bee and Honey Section, Royal Show, 1922.

Week-End Bee-Keeping.

By S. H. Smith.

(*Continued from page* 304.)

After tea, D. B. and I went to the shed for the two extra brood chambers, and he asked me if I had read his note. I had to confess that I had put it unread into the pocket of my workjacket and forgotten all about it, having been busy with my bees. For the next few minutes he detailed in swift and forcible language a list of crimes on the part of those "paying guests" that was decidedly disconcerting.

He said he had written it all down in his note, and he had done this to warn me to be ready for questions that might prove inconvenient to answer offhand. But what was the use?

He also mentioned that a large parcel had arrived addressed to me, and expressed the fear that if I had made further purchases, that our joint treasury would not be able to finance them. I asked him to kindly produce the package, which contained only personal belongings, and as he headed for the house I requested him to ask the twins if they possessed a blackboard, to bring it out.

There was not much time to plan everything. The maid was clearing away the tea things, and for a few moments we were alone. She looked at me sourly, one eye still showing the results of an encounter with a bee. An expression of regret and the changing of hands of certain coins of the realm transformed a frown into a smile. I had even hopes that some inspiration would yet enable me to square matters with Mrs. D. B.

The twins came racing back with a small blackboard and various pieces of coloured chalk. Mrs. D. B. came with some sewing, and D. B. brought out a large bundle. They then lined up on the garden seat, and it was up to me to make good.

First of all I chalked on the blackboard the following equation:—

£20 = two bee stocks.

Then, without further explanations, I turned to the divided bee stocks.

We will now find the queens in the quiet parts of these divided stocks and put them into the third brood chambers. As you can see, the bees are shouting to us by their uneasy movements that they miss their queens, and there is no necessity to prolong their unhappy condition. I shall appreciate the help of all the eyes the D. B. family possesses.

She is not on this first comb, nor on the second. Thank you, Daphne, your young eyes spotted her before I had the third comb out of the brood chamber. There she goes—a beauty—easily seen because her golden body shows up so well when not hidden by her wings. Yes, I clip all queens worth keeping. In goes the comb she is on, and two more to help keep her snug and warm. We fill up with frames of foundation, place an excluder on that brood chamber, and set it on the floorboard.

The second brood chamber contains now only seven combs of brood, etc. We fill it up with three frames of foundation and put it on the excluder. The third brood chamber with the uneasy bees goes on top. The quilts are replaced, and the roof goes on. You will notice that the outer cases, or lifts, no longer reach up far enough to cover this third brood chamber. It does not matter, as during the coming hot months we shall remove all outer cases.

In a very few minutes the reunited bee stocks will be humming contentedly, as every member of the community will know the queen is again with them, and be rejoicing accordingly.

We repeat the performance with the second stock. Please note how carefully I scan each comb for queen cells. I do not intend to disturb these stocks again until this day next week, and so I must be particularly careful. You win, Beryll; the queen is on the very first comb we take out. Dear me! To think that my practised eyes should be beaten by young eyes that have never yet seen a queen bee at close quarters. Yes, there she goes, searching for clean and polished cells. See her stop, examine a cell, and back into it to lay an egg. As she proceeds over the combs she often stops to beg food from willing attendants. She needs a lot of nourishment, as she will sometimes lay eggs in one day that will weigh as much, even twice, as her own weight.

In goes the comb and two more, and we can now quickly finish the work. You see before you two three-brood-chamber stocks in being. It will take probably about two weeks for them to get in good working order. We shall then call upon them to make good.

The introduction into the garden of the most harmonious family of a couple of bee stocks will require explanations, even when labelled as "paying guests." To justify their presence their contribution to the family exchequer must be a liberal one, much more so than the usual statement of the printed books that £1 per bee stock is the probable profit to be anticipated. Nowadays such a small dividend would be of little use to help support the million or so of totally unnecessary bureaucrats who have their hoofs in the public money troughs.

An overburdened English ratepayer would look askance at an investment that fluctuates in value like a bee stock, and that may be come at any time a disappearing security if it did not yield proportionately big dividends.

Well I think I knew what I was about when I proposed to D. B. to go shares in this venture as far as the financial end is concerned. What I did not know was that back of D. B. was the charming family circle I see before me. My idea was to appear for an hour or two every fortnight to interview the bees. Most of the education of D. B. in bee matters would have gone forward in my apiary. It is true that I took certain precautions to avoid any untoward occurrences. Unfortunately these proved inadequate. My tactics and strategy were at fault. I humbly apologise for lapses on the part of myself and the bees. Give us time and we will make full reparation.

And now let us examine the equation on the blackboard.

(*To be continued.*)

Notes from Gretna Green.

As anticipated, the season is turning out a late one, and Midsummer Day has found us without swarms or surplus honey.

Even the Dutch and Carniolan stocks have had their swarming propensities effectively discouraged by the lack of income associated with cold wet weather. In short, the season to date is an absolute blank, and at the moment bees are decidedly more interested in feeders than supers of any kind.

Meantime, I am keeping fed colonies employed in drawing out foundation, and the new Dadant wired type is being tested with very favourable results. With bees covering twenty to thirty combs now, when honey does come supers will fill quickly provided there is no break up of forces through swarming, and this eventuality has to be reckoned with in comb-honey production.

The usual plan of hiving swarms on the old stand involves a certain division of the working force and can be improved upon where no increase is desired.

Last summer I treated mid-season swarms by hiving on the old stand, giving two combs brood and filling up with frames containing starters only, section supers being replaced above. The removed brood combs had all adhering bees shaken off to join the swarm, and the beeless brood was then placed above excluder on an extracting colony.

About a week after the swarm was examined, all broodless or defective combs being removed and replaced by combs of brood with adhering bees taken back from the nursing hive. This method was quite effective in every way, and worth trying in the case of unwelcome swarms coming off at the height of the honey-flow. Apropos of queen introduction, the safest way is also the simplest, and I have yet to see it fail. Two combs of bees with honey and pollen, but minus queen, brood, or eggs are removed from any colony and shut up securely in a nucleus hive to mourn their hopeless condition for half-an-hour. The new queen in her travelling cage is then put on the top bars and released in the usual way by the bees eating away the candy.

In carrying out this method the bees *must* be confined in some way or they will desert before the queen is released.—J. M. ELLIS.

Medway and Counties' Beekeepers' Association.

The prominence which the local press gave, three weeks ago, to the initial visit of the newly-formed Medway and Counties' Beekeepers' Association to Upchurch had, undoubtedly, a deal to do with the large and representative attendance on the occasion of the second "pilgrimage" to Borstal. The host and lecturer was the Rev. J. Butler (Chaplain to Borstal Institution) who, with Mrs. Butler, gave a hearty welcome to the beekeepers and friends from both far and near. The spacious lawn in front of the house, surrounded by the most odoriferous of summer roses, made an ideal and cool spot, and the whole conditions were delightful.

Captain Leach (Walderslade) officiated as Chairman, and amongst prominent folk were Colonel and Mrs. Haines, the Rev. E. Francis, Councillor and Mrs. E. Scoones, Mr. A. R. Castle (Packman Memorial), Mr. E. Semper, and Mr. C. H. Langley (Gillingham), and, of course, Mr. G. Bryden (hon sec.), who was as ubiquitous as ever.

The Rev. J. Butler's subject was, "The Demaree System for Increase and Honey Production," which, he stated, was really founded in a desire to prevent swarming. Every beginner loved the excitement created by a swarm, but as time went on that excitement began to pall. Though it was a natural tendency of bees to swarm, apiarists endeavoured to keep it under control as much as possible and various devices had already been tried. One device was giving the bees more room in the supers. That was useful, but the allowing of more room in the supers alone was not sufficient; room must also be given in the brood chamber. Neither had larger combs prevented swarming. The standard English frame was, in his opinion, the best frame for all purposes. Some of his friends had tried large frames, but he had not heard of their success, and he thought he would have done so had they been successful, for beekeepers resembled anglers—they told one another when they did anything good. The large frame had evidently not prevented swarming. Neither had the experiment of two brood chambers.

The lecturer next dealt with the American method of clipping the queen's wings. The Americans were nothing if not ingenious, but speaking from theory—he had never tried it personally—he thought that that device had objections. First of all, the queen, with her wings clipped, was unable to fly; she dropped to the ground, and unless one were on the spot, it might not be possible to get her back. Then one would have a queenless stock. Then there was a further danger of the bees, themselves, seeing that the queen was maimed, killing her and raising another and still swarming. Still, there were men who "swore by" this system.

Then there was the "Shook" system, which was practically identical in principle with the Demaree, but "a messier job." It was a system of swarm checking. The lecturer then explained the Demaree device, which may be summarised as follows:—"Remove the brood chamber from the old stand and replace by a new chamber containing empty combs. Find the queen and place her with the comb on which she is found in the new brood chamber; add another comb from the old chamber; put the queen-excluder on top of this; then two supers with combs; and on top of all the old brood chamber with its eight combs of bees and two empty combs from the new chamber."

The operation was now complete. The

system was simple, not "messy," and there was no shaking of the bees. He had Demareed a hive in fifteen minutes, but it was no good doing it with a weak colony or with little honey coming in. The system was a good one in two ways, both for honey production and for the increase of stock. In nine days' time, queen cells would be found in the top chamber and might be cut out if honey only were required, or nuclei might be made if increase of stocks were desired. If they wanted to improve their stock, he urged them not to Demaree until they got their bottom brood box chock-block, and plenty of honey coming in.

Questions being invited, various members put queries to Mr. Butler, who answered each and all to their satisfaction. In answer to one question, he stated that he had Demareed three hives this season and that none of them had swarmed.

Tea was served by the ladies of the Social Committee, and afterwards, in the adjoining apiary, Mr. Butler gave a practical demonstration of Demareeing a hive and of forming nuclei, this ingenious process being followed with the keenest interest by the visitors.

Captain Leach tendered to Mr. Butler the warmest thanks of the Association for the instructive afternoon he had provided.—(*Communicated.*)

Essex Beekeepers' Association.

The annual show of the Essex Beekeepers' Association was held at Chelmsford on June 7 and 8 at the Diamond Jubilee Show of the Essex Agricultural Society. Fine weather prevailed on both days, and this resulted in a record attendance. Owing to the late spring there were not so many entries as could have been wished, but the honey staged was of good quality. The entries were staged by the County Bee Inspector and judged by Mr. Alder, Secretary of the E.B.K.A., who also lectured both days in the bee tent to very large audiences. Mr. Winn, of Hornchurch, and Mr. Gamble, of Battlesbridge, acted as stewards, and gave most valuable assistance in replying to the many questions asked by interested enquirers, whilst old members through the medium of the show were enabled to meet and confer with one another over their difficulties. Altogether a very successful and enjoyable meeting was held.

The awards were as follow:—

Best and most inexpensive frame Hive: 1st, E. H. Taylor, Ltd.

Observatory Hive: 1st, G. A. Taylor, Ongar.

Six 1-lb. Sections: 1st, G. A. Taylor; 2nd, Mrs. Berington-Smith, Wickham; h.c., Miss Wilson, Canfield.

Three 1-lb. Sections: 1st, A. C. Tew, Tiptree; 2nd, Miss Wilson; h.c., G. A. Taylor.

One 1-lb. Section: 1st, Miss Wilson; 2nd, A. C. Tew; h.c., Mrs. Berington-Smith; com., G. A. Taylor.

Shallow Frame Honey: 1st, G. A. Taylor.

Six 1-lb. Jars: 1st, A. C. Tew; 2nd, G. A. Taylor.

Three 1-lb. Jars: 1st, Mrs. Berington-Smith; 2nd, Mrs. Lilley, Lamarsh.

One 1-lb. Jar: 1st, Mrs. Lilley; 2nd, Mrs. B. Smith.

Six 1-lb. Granulated: 1st, F. Bird, Canfield; 2nd, A. C. Tew.

Trophy: 1st, A. C. Tew; 2nd, G. A. Taylor.

Bees' Wax: 1st, Mrs. Pharall, Rayleigh; 2nd, G. A. Taylor.

Mead: 1st, G. A. Taylor.

Honey Cake: 1st, G. A. Taylor; 2nd, A. C. Tew.

Interesting Exhibit: 1st, A. C. Tew; 2nd, G. A. Taylor.

Silver Medal (points): G. A. Taylor; Bronze, A. C. Tew.

Manchester and District B.K.A.

There were thirty-two members and friends visiting the apiaries at Flixton and Davyhulme, calling en route on Mr. L. Davies, Miss Taylor, Mr. Smith, and Mr. Chilton. The first stock examined was in a W.B.C. hive. It had a rack of sections fully drawn out and a fair amount of honey; the body box had ten combs of bees boiling over, with brood in every comb. To see them handled without veil prompted one to think here was a stock of the stingless variety. We were told it had wintered on stores left in from the heather, beside having given a good surplus in the super. Another stock in this apiary was in a Simmin's Conqueror, with commercial size frames; the back was taken off and used as a table, the brood box drawn out and put on this table, when each comb was taken out and transferred to another. All the members of this great colony, who were "at home," and there were ten combs, were lifted out comb by comb crowded with bees, great slabs of brood, some emerging before our eyes, and yet never a sting. Turning to the entrance we could see that the colony was working away as though nothing was going on unusual at the back of the house. Lifting out a comb from the super (of which there were two boxes) we saw honey of a beautiful light colour, which we thought was of fruit nectar. On one hive we saw the disadvantage of a queen-excluder being inserted in a wooden frame. Most of the frames in the body box were fastened to the excluder with connections of comb or propolis.

At Mr. Chilton's we came across one of those eccentricities which sometimes happen. A colony had lost its queen; the bees built a queen cell in the centre of a comb; they must have put in an egg, but it did not hatch in the usual time, and when it was a week overdue the beekeeper opened it and found it had a drone inside.

Bees came home dusted with pollen. Some flowers were not satisfied with the bee loading up her pollen baskets, but dowsed her with it, and she had a golden appearance as she came home with her treasure. The air was laden with perfume, we might be passing a hawthorn, enow it was a lilac—

the effect was the same, we saw that all were giving; more! were giving of their best. As we gazed upon bloom on the trees it was like the passing of a pageant, yet it was a splendour that would stand minute examination. While each flower had its own peculiar colour or mixture of colours, its own special form and shape, they all had this pollen, and often these drops of nectar hidden away where their insect complement could find it.

As we watch it all we see the blessings that a beekeeper is bestowing on his kind. He is doing his duty in the economy of Nature; he may not make two blades of grass instead of one; he makes clover bloom run on to seed, fruit trees yield precious harvests, while he himself reaps stores of honey, his confections, his food the result.

J. WHITTAKER, Hon. Sec.

CORRESPONDENCE.

Six Queens in a Swarm.

[10663] I should be grateful if you would let me know through the "B.B. Journal" if it is about a record to find six queens in a second swarm of ordinary size. I had decided to unite them with another small lot that I had. Fortunately, I had taken the precaution to put a piece of queen excluder in front of entrance, so if I should miss seeing the queen go up the board she could not get inside, as I was showing a nephew of mine (14 years old) how the two lots would take to one another with just a little flour dusted over them. I soon saw the queen, and put her in a match-box; then I saw three more going up, very nearly side by side, so I killed those. Then when most had gone in, I saw two more trying to get through the excluder, so caught them. The bees are Italians.

I have kept bees over twenty years and have not had this experience before, but since taking the "B.B. Journal" for the last three years I find, through studying its contents, that I am just a novice.—C. MINTON, Shropshire.

[So far as we know the above is a record. —EDS.]

QUERIES AND REPLIES.

Driving Bees from Box Hives.

[9940] Having received the offer of a number of condemned bees in the coming autumn, I promptly undertook to drive them and leave the combs for the owner. I now find they are in a number of overturned grocer's boxes, side by side on a bench, and I feel I have let myself in for a somewhat awkward task. Could you give me any hints beyond those in the Guide Book on getting the bees out of these boxes? Should I drive into a skep? If so, how to fix it to a box. Will drumming be as effective as in the case of skep bees? There are about half-a-dozen lots to drive, and I want to join them all up into one, or possibly two, frame hives. The owner wants them left till the end of September. Is not this very late? Any suggestions as to how to proceed will be very welcome.—A. ABSELL.

REPLY.—The difficulty in driving bees from box hives is in fixing the skep or box into which the bees are to be driven. A bradawl or gimlet will be needed for making holes in the box to take the "dogs" used to support the empty box or skep and the pin at the join. A large cloth will be needed to make the junction good, especially if a skep is used, as the round edge of the skep only touches the straight edge of the box for a very short distance. One corner of the cloth is made fast to one of the "dogs," the cloth passed behind the join and the opposite corner fastened to the other "dog." A box will, of course, fit better, but the cloth is needed to prevent bees running outside at the corners. Do not allow the edge of box or skep to project over the inside edge of box hive, or the bees will not go up freely, owing to many bees clustering under the overhanging portions. "Drumming" will be quite as effective with a box as with a skep. You may also drive several lots of bees into the skep or box without flouring or taking other precautions to prevent fighting; the bees will unite quite peaceably. September is late. You must hive them on drawn out combs if possible

Honey Imports.

The registered value of honey imported into the United Kingdom during the month of May, 1922, was £24,282.—From a return furnished by the Statistical Office, H.M. Customs.

Bee Shows to Come.

A nominal charge of 2s. 6d. is made for notices (not exceeding 7 lines) in this column, 10 lines charged 3s. 6d. up to 15 lines 6s., which covers cost of insertion from order till date of show. Cash should accompany orders for insertion.

Royal Show, Cambridge, July 4 to 8.—Over £40 in prizes. All classes open.—Schedules and all information from Mr. E. C. R. Holloway, Burwell, near Cambridge. **Entries closed.**

July 19.—Wickham Bishops and District Beekeepers' Co-operative Association, in connection with Flower Show.—Three classes open to beekeepers resident in Essex and one class open to residents in the British Isles. Prizes up to £1 1s. Entrance fee 6d. per class.—For Schedules apply, enclosing stamp, to R. A. Pelly, Wickham Bishops, Essex. **Entries close on July 12.**

July 19 and 20.—Warwickshire Bee-keepers' Association, in connection with the Warwickshire Agricultural Society's Show at Nuneaton. Open Classes for Honey, Wax, Hives and Bee Appliances. —Schedules from Secretary, Geo. Franklin, Burton Green, Kenilworth. **Entries close July 10.**

July 20 and 21.—Lincolnshire Bee-keepers' Association Show of Honey, Wax, Hives, Appliances, etc., at Skegness. Over £30 in prizes. Open and County Classes.—Schedules and Entry Forms from Major J. H. Hadfield, Alford, Lincs. **Entries close on June 19.**

July 22.—Wyke, Normandy and District Horticultural Society's Annual Show. Honey: 5 Classes (Sections and Extracted). Open; Honey: 4 Classes (Sections and Extracted), Local; 1 Class Wax, Open. The Surrey Bee-keepers' Association offers to duplicate all first prizes in open section (Class 86 excepted).—For further particulars and Schedules apply to Hon. Sec., F. G. Kennard, Pirbright Road, Normandy.

July 22, at Mill Hill, N.W.—In connection with the Flower, Fruit and Vegetable Show, under the auspices of Hale and District Allotment Association. Classes for honey and wax exhibits for competition.—Schedules are ready, and may be obtained by sending stamped, addressed envelope to the Hon. Secretary, Mr. A. Bacon, Yew bank, Tennyson Road, Mill Hill, N.W.7. **Entries close July 15.**

July 26, 1922.—The Honey Show of the Wallop Horticultural and Floral Society have District and Open Classes for Sections and Extracted Honey.—Apply for Schedules to Mr. P. E. Roberts, School House, Nether Wallop, Hants.—**Entries close July 19.**

July 26-27, at Cardiff, Sophia Gardens.—Glamorgan Bee-keepers Association, in connection with Cardiff and County Horticultural Society's Show. Open Classes. Special prizes; Taylor's W.B.C. Hive and Apis Club Bronze Medal.—Schedules from Secretary, Chas. F. Davies, 5, Borstal Avenue, Cardiff

August Bank Holiday.—Cambridge Mammoth Show. Open Classes. Special one bottle and one section class.—Schedules from Mr. E. C. R. Holloway, Burwell, near Cambridge.

August 3, at Uttoxeter.—Staffordshire Bee-keepers' Association, in conjunction with Staffs. Agricultural Society. Seven silver six bronze medals, are offered, including B.B.K.A., Staffs. B.K.A., Staffs. Agricultural Society, and Uttoxeter Agricultural Society. Liberal prize money.—Schedules and Entry Forms from W. Griffiths, Solway House, Queensville, Stafford. **Entries close July 15.**

August 23, at Bartley Cross.—New Forest B.K.A., in connection with the New Forest Agricultural and Horticultural Association. Open and Local Classes for Honey and Appliances.—Schedules from Mr. W. Cooper, Marley House, Netley Marsh, Southampton. **Entries close August 6.**

August 26, at Hinckley, in connection with the Hinckley Sweet Pea and Rose Society's Annual Show.—Open to all bee-keepers. First prize, 12s. 6d.; second price, 7s. 6d.; and third prize, 4s.—Schedules are ready, and may be obtained by sending stamped, addressed envelope to the Hon. Secretary, A. Kimbrell, 119, Clarendon Road, Hinckley, Leicestershire. **Entries close August 21, 1922.**

August 31, 1922.—Winchester Domestic Live Stock Association Show. Schedule of Honey Classes Open:—Class 5, one shallow frame: Class 6, six sections of 1922 honey; Class 7, six 1-lb. screw stoppered bottles of 1922 honey; Class 8, trophy of bee products to be arranged on table space 3 ft. by 3 ft.—Entry Forms to be obtained from M. W. Castle, 80, High Street, Winchester.

September 2.—Peterborough, Oundle and District Bee-keepers' Association. Show of honey, Co-operative Hall, Peterborough. Members and Open Classes. Open (entry fee 2s.), 12 bottles Extracted Light Honey, first prize, £1 10s.; second, £1; third, 10s. Gift Class (entry free). Bottle Extracted Honey to be sold for N.F.B. Orphan Fund. First prize, W.B.C. hive; second, Appliances 15s.; third, 7s. 6d.—Schedules and Entry Forms, G. H. Seamer, Hon. Sec., Waterloo Road, Peterborough. **Closing date, August 19, 1922.**

September 9.—Middlesex Bee-keepers' Association, in conjunction with the Brentford Allotments Association Annual Show, at the Wesleyan School Hall, Clifden Road, Brentford. Twelve Open Classes for Honey, Wax, etc.—Schedules and Entry Forms from R. R. Babbage, 33, Whitestile Road, Brentford, Middlesex.

September 16 to 22.—British Bee-keepers' Association Annual Show at Grocers' Exhibition, Royal Agricultural Hall, Islington, London.—Schedules from Hon. Secretary, B.B.K.A., 23, Bedford Street, Strand, London, W.C.2. **Entries close certain September 4.**

Special Prepaid Advertisements.

One Penny per Word.

Trade *advertisements of Bees, Honey, Queens, and Bee goods are not permissible at above rate, but will be inserted at* **1½d.** *per word as* **"Business"** *Announcements,* immediately under the *Private Advertisements. Advertisements of Hive-manufacturers can only be inserted at a minimum charge of 6s. per* ½*in., or 12s. per inch.*

PRIVATE ADVERTISEMENTS are only intended for readers having **Surplus Stock** *to dispose of.* **Driven Bees, Nuclei,** *and* **Queens that are reared or imported for sale,** *are Trade Advertisements, and can only be accepted under trade terms. A charge of 6d. extra per insertion will be made if a box number is used.*

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Advertisements must reach us NOT LATER than FIRST POST on MONDAY MORNING for insertion in the "Journal" the same week.

PRIVATE ADVERTISEMENTS.

STRONG, healthy stocks of Italian Hybrids and Blacks for sale, on 8 frames, carriage paid, 60s.—CREEK, Mill Road, Bury St. Edmunds. f.142

SALE.—BEES, surplus healthy stocks, 6, 8 frames wired, pure Italians, 40s., 50s.; Blacks or Hybrids, 35s., 45s., carriage paid.—RICHARDSON, Witchford Road, Ely. f.143

WANTED.—Plate Glass for Trophy Display; also tall screw-top Pillar Bottles.—Box 80, B.B.J. Office, 23, Bedford Street, Strand, W.C.2. f.144

14 HIVES OF BEES, with Racks of Sections on. Bees up in sections £5 each. To be seen any time.—HICKS, Belmont, Woodside Avenue, North Finchley. f.145

PENNA'S ITALIANS.—Strong 6 frame stock, with genuine Penna Queen; price £2; guaranteed; carriage paid; 5s. on box, returnable.—Box 81, B.B.J. Office, 23, Bedford Street, Strand, W.C.2. f.146

FOR SALE.—Hen and brood of chickens, 5 weeks old, R.I.R. (measures); White Wyandottes, heavy laying strains; low price; stamp, particulars.—REV. H. CROWE, Merriott, Crewkerne. f.147

RACKS, second-hand, wanted, section and shallow W.B.C.; also shallow frames with drawn out worker comb.—Y., "Monken Hadley," Braintree. f.149

FOR SALE.—W.B.C. Hive with non-swarming brood chamber, practically new, 25s.; two 10-frame hives, 15s. and 20s.; 6-in. lifts, 3s. each; rack shallow frames, partly drawn out, 10s. 6d.; section rack, 1s. 6d.—ROBINSON, Ennismore, Marlow, Bucks. f.150

BEES FOR SALE, Stocks free from disease; good Queens.—FULLARTON, Memsie, Aberdeenshire. f.154

WANTED. Second-hand Extractor.—Price and particulars to CHARLES HOPPER, Kidlington, Oxon. f.156

PURE Light English Honey for sale; sample 6d.—JAMES STARLING, Bowers Lane, Isleham, Cambs. f.174

FOR SALE.—A Cottage Extractor, extracts two shallows or two standard; clean, good condition; 28s., carriage paid.—H. KEELING, 103, Wolverhampton Road, Walsall. f.153

SWARMS BEES, £1, 25s. each, honeycombs 20s. dozen.—NORTH, Notley, Witham, Essex. f.175

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YOUNG fertile honey getting Italian-Carniolan Queen on frame with bees, 12s. 6d., box 4s., returnable; six 5-frame Stocks, 40s. each.—BARRETT, Cecil Park, Pinner. r.f.155

ITALIAN HYBRIDS for sale, owing to removal; two Stocks on ten frames, packed bees and brood; perfectly healthy. 170, St. Leonard's Road, East Sheen, S.W.14. f.173

HONEY wanted, any quantity in bulk up to 10 tons; must be guaranteed best English. Box No. 82, B.B.J. Office, 23, Bedford Street, Strand, W.C.2. f.r.177

OBSERVATORY HIVE for sale, mahogany, takes three standard frames and four sections or one shallow frame; complete with shutters; offered as a bargain.—MISS HART, 253, Stratford Road, Birmingham.

PRIME SWARMS from healthy stocks, June, 6s. per lb.; Stocks on frames, 7s. per frame; carriage forward; crates returnable.—CURTIS, The Limes, Holbeach. r.f.104

LIQUID HONEY for Sale.—GEO. NEAL, Mill Road, Freckenham, Ely. f.94

SELL—Rotax all-brass Motor Car Head Lamps, self-contained acetylene, very powerful, 30s. the pair; two small powerful Acetylene Brass Head Lamps, with separate generator, suitable light car or cycle car, £3 the set; Austin Rear Wind Screen, mahogany framework, £7; Mills' Automatic Acetylene Generating Plant, suitable for 10-roomed house, £6; quantity of Acetylene Gas Brackets and Chandeliers, prices with particulars; small folding Magic Lantern, 30s.; motor cycle all-rubber Ponco, reaches to ankles, wind- and weather-proof neck and sleeves, 50s.; all carriage forward.—HERROD-HEMPSALL, Old Bedford Road, Luton, Beds. c.77

BUSINESS ADVERTISEMENTS.

1½d. per word.

THE WISE BEE-KEEPER looks for quality. The South Hampshire Apiaries breed only from the very best strains. Result: Quality and satisfaction. Beginners' Outfits from £5.—All communications, H. E. NEWTON, New Milton, Hants.

FOR SALE.—8 Frame Stocks, 50s.; Hybrid Fertile Queens, 6s. 6d.—ASHWORTH, Pound Street, Warminster. f.148

E. H. TAYLOR, LTD., WELWYN, HERTS

The Largest Bee Appliance Manufacturers in Europe.

FORTY PAGE ILLUSTRATED CATALOGUE POST FREE.

WANTED, small Pump for tank in greenhouse.—Price and particulars to W. HERROD-HEMPSALL, Luton, Beds. f.108

HYBRID ITALIANS, June Swarms, hived on standard combs, 25s., carriage paid.—WALLACE, Hedenham Lodge, Bungay, Suffolk. f.114

FOR SALE, 6-, 8- and 10-frame Stocks, guaranteed healthy, 48s., 58s. and 66s.; 7s. 6d. deposit on returnable box. Inspection invited.—THOMSON, Hill Road, Stonehouse, Lanarkshire. f.117

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SURPLUS SWARMS, Italians, 6s. 6d. per lb., carriage paid.—OSBORN, Glenfield, Bideford. r.f.61

SURPLUS STOCKS.—Pure Italian 1922 imported Queens, 10 frames, wired, 60s.; box 10s., returnable.—Box No. 77, B.B.J. Office, 23, Bedford Street, Strand, W.C.2. r.f.100

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CORNWALL BEE RESTOCKING COMMITTEE has a few 4-frames Nuclei to dispose of at 32s. 6d. each, carriage paid; boxes charged 10s., returnable.—KNIGHT, Hon. Sec., Kenwyn, Truro. f.152

BEES on well wired regular worker combs with 1922 Penna Italian Queens, 3 frames 37s. 6d., 8 frames £3 15s.; very strong with bees and brood; also on commercial frames; Hybrids at cheaper rates; boxes 10s., returnable. D. M. CUTHBERTSON, Finmere, Buckingham.

REQUEEN this autumn with Buckfast Queens. Our customers declare them to be the finest obtainable. Prices for select Queens from mid-July to mid-August are as follows:—1-4 at 12s. 6d.; 5-9 at 12s.; 10 or more at 11s. Descriptive circular free on application.—Br. ADAM, The Abbey, Buckfast, S. Devon. r.f.176

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PENNA QUEENS.

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	May.	June.	July.	August.	September.
**One Young Pure Fertile Italian Queen .. .. ..

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ITALIAN STOCKS on 8 frames, £3 15s.; prompt delivery.—J. H. DOGGETT, Abbey Apiary, Beche Road, Cambridge. f.49

BEES wanted. Queens for Sale. 7s. 6d. each.—BEE SUPPLIES & PRODUCTS ASSOCIATION, LTD., 39s. Wandle Road, S.W.17. f.47

BUYERS of Sections and English Run Honey are THE VIKING FOOD & ESSENCE CO., 12, Brandon Road, King's Cross, who will be pleased to purchase and receive offers. r.e.136

JACK TICKELL.—For Queens, Stocks and Nuclei. List free. — Westbourne Apiary, Cheltenham. r.a.54

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New Hive Tool PRICE 3/6

BOOK NOW!—Choicest home-bred Carniolan Queens for 1922.—PEARSON & GALE, Marlborough. b.24

DUTCH BEES.—Send for my artistically Illustrated Catalogue outlining my method of managing bees profitably. Read my notes on Queens and Queen Rearing. Will interest the expert and amateur. Free for the asking.—WHYTE, Bee Farm, Cumbernauld Station, Dumbartonshire. r.b.32

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THE ACARINE 1921 ECLIPSE PAD.—It knocks out mites and moths. Your money back if not satisfactory. Price 2s. 6d., post paid.—S. H. SMITH, 30, Maid's Causeway, Cambridge. d.37

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GORDON ROWE, 28a, Moy Road, Cardiff. 'Phone: 2422. Tel.: "Sunflower, Cardiff."

PARCHMENT CONTAINERS, stamped "Fine Lemon Curd," offered at half price to honey producers who can affix labels over the printing, 1 lb., 4s. 9d.; ½ lb., 4s.; ¼ lb., 3s. 6d.; ⅛ lb., 2s. 3d. per 100. Also plain 2 lbs., 14s.; plain 1 lb., 9s. 6d. per 100. Add for carriage 1s. 6d. to each 5s. value ordered. Pure Honey for bee feeding, etc., 60-lb. tins, 50s. cwt., f.o.r. Terms cash. Samples 6d.

QUEENS by return from April till October.—PEARSON & GALE, Marlborough. w.14

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CHOICE COLONIAL HONEY 60/- per cwt. in 60 lb. tins PALE GOOD FLAVOUR.

BOTTLES! BOTTLES! BOTTLES!

Glass HONEY JARS slightly GREEN SHADE which BETTER PRESERVES the FLAVOUR of the Honey.

Nom. Lbs. 12/- gross. Nom. ½ Lbs. 9/- gross (including Screw Tops). Delivered to READING station. Packages charged 6d. per gross

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White Flint, Screw Cap, and Cork Wads.
1 lb. 30/-, ½ lb. 25/- per gross.
3/3 and 2/6 per dozen.
COBB BROS., 33, BEVAN ROAD, PLUMSTEAD.

Postage Down.
Price of Honey Bottles Down.
Write to
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BEE APPLIANCE MAKER, WEST ASHLING, CHICHESTER,
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THE British Bee-Keepers' Association.
Insure *now* against loss by damage done through bee stings. All particulars from
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A NEW BOTTLE BOX.

A cheap way of packing honey for sending
: : by rail. See our exhibit at the : :
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in Hives and Bees get them from THE THAMES VALLEY BEES (Regd.) TEDDINGTON.
The "Thames" Hive, 28/-; Appliances; Cleopatra or Penna Stocks (from 38/-).
All for IMMEDIATE DELIVERY.

COTSWOLD QUEENS. Raised in a noted honey district from choice 3-banded stock, these are an exceptional investment. They produce just the hardy thrifty workers British beekeepers require.
SELECTED QUEENS, 1—10/6, 2—20/- 3—8/6. VIRGIN QUEENS, 1—4/- 3—10/6 per return.
LT. BOWEN, CORONATION ROAD, CHELTENHAM.

HONEY JARS.

WHITE FLINT GLASS SCREW TOP WITH CAPS AND WADS.

"ACTUAL" AND "NOMINAL."

1-lb. - 32/- per gross

½-lb. - 26/- per gross

NETT CASH WITH ORDER. FREE ON RAILS, PACKAGES FREE.

5 Gross Lots 1-lb. 30/- per gross

10 Gross Lots 1-lb. 28/- per gross

IN ONE DELIVERY.

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50 & 52, Hanover Street, LIVERPOOL.

DUTCH BEES.

Slump in Prices!!

Before placing Orders send for my Catalogue. It will pay you.

24 pages original matter, outlining a new system of profitable management, notes on queens and queen rearing. Full of Illustrations.

STOCKS. NUCLEI. QUEENS. SKEPS.

Far and away the largest importer of bees in Britain. Dutch bees are resistant to disease. Dutch bees are prolific. Dutch bees hold the record for honey production. Dutch bees are gentle.

WHYTE, Bee Farmer, Cumbernauld Station,
DUMBARTONSHIRE.

THEY are mowing the Sainfoin here in the foothills. On Monday we migrate to Maure, par Seyne-les-Alpes **(4,390 feet above sea-level)** where the Sainfoin is just opening its first flowers and will be followed by sage, mountain thyme, lavender, winter savoury, alpine pasture plants and spruce honey-dew, making together a **heavy honey-flow lasting until the Autumn rains and frosts. Queens reared during a heavy, natural honey flow are Nature's best queens.** Only one other breeder on earth, (California, U.S.A.) goes to such trouble and expense in insuring choice queens for his clients: **I** deserve **your** orders; can **you** afford to order elsewhere? Only the best queens bring the big profits; and when you are satisfied, so am I: is that fair? An **American Beauty** (pure) or a Carniolan Alpine queen mated to an **American Beauty** drone—July 9/-, Aug.-Sept. 8/-. Cash with order.

SKIPWITH CANNELL **Maure, par Seyne-les-Alpes, B.A., France.**

For BEST Bees, BEE Hives, BEE Appliances

Send to **C. T. OVERTON & SONS,**
CRAWLEY, SUSSEX.
1922 Illustrated Catalogue Free. Established 1883.

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The Bee-Keepers' Calendar.

JULY, 1922

6 Thursday. "I slept not, tho' the wild bees made
A dreamlike murmuring in the shade,
And on me the warm-fingered hours
Pressed with the drowsy smell of flowers."
J. G. Whittier, "The Wife of Manoah."

7 Friday "Mother, brother, pull the flowers I planted in the spring
And smiled to think I should smile more upon their gathering:
The bees will find out other flowers—oh, pull them, dearest mine,
And carry them and carry me before Saint Agnes' shrine."
E. B. Browning, "The Lay of the Brown Rosary."

8 Saturday "Brown bee-orchis and Peals of Bells;
Clover, burnet and thyme she smells;
Like Oberon's meadows her garden is
Drowsy from dawn till dusk with bees."
W. de la Mare, "A Widow's Weeds."

9 Sunday "Mounsieur Cobweb, good mounsieur, get you your weapons in your hand and kill me a red-hipped bumble bee on the top of a thistle: and, good mounsieur, bring me the honey-bag. Do not fret yourself too much in the action, mounsieur; and have a care the honey-bag break not."
Shakespeare, "A Midsummer Night's Dream."

10 Monday "And oft with bolder wing, they soaring dare
The purple heath, or where the wild thyme grows,
And yellow load them with the luscious spoil."
Thomson, "Spring."

11 Tuesday "A honey-flower's the honeysuckle
And the bee's in the honey-bell."
D. G. Rossetti, "Chimes."

12 Wednesday "'A swarm that's in July
Is hardly worth a fly,'
But feed them through the winter,
They'll pay you by-and-by:
When the spring awakes them
To the sunny orchards,
And they gather in their gold
They'll pay you by-and-by." *E. S. F. (B.B.J. 5, VII. '17.)*

Seasonable Hints.

The weather continues wet and cold, and though bees are working whenever possible they have, during the past week, not gathered enough nectar to meet current needs, and we repeat our warning to see that swarms and nuclei are not short of stores.

The subject for our monthly essay competition in the BEE-KEEPERS' RECORD this month is "Notes on the Regular Contraction and Expansion of the Hive Interior." There is no entry fee, but essays must have the coupon printed in the RECORD attached, and be sent in by July 20. Prizes of 20s., 10s., and 5s. are offered. Full particulars will be found in the RECORD for July.

A Dorset Yarn.

"You would ask me the time of the day, There is no time in the forest."

Our bees seem to act as if the time of honey flow was over. Hot sun made them very active on Thursday afternoon, but Saturday, July 1, they were on the sections and bars, without that hurrying movement one likes to see, so cold it is in Dorset. This Sunday morn the sun shines but wind is still cold. Bees seem to be so sluggish in their actions when one lifts the warm covering from off the glass.

If there "is no time in the forest," bees do not know the time of harvest. There are acres of flowering fields quite close to our bees, but cold seems to confuse them in their actions; warmth is a great factor for harvesting surplus; sections seem to be "marking time," it is only with shallow combs that one can find any addition, but these are not filled quickly. Acres of bell heather on one side of them, 40 acres of flowering fields on the other, never were better times for forage. The showery weather has stopped the grass-cutters; bees should do well, if only the sun shone warm. Some bee-keepers have harvested a lot of surplus. Mr. Garrett, our East Dorset secretary, tells me of full racks of standards and shallows on one non-swarming hive, of two shallows and one rack of sections before June ended; but for good hard work by bees, none work like a large natural swarm. I gave one two brood chambers to start with; now, just a month of working, the colony seems to have doubled in number. On Friday there seemed to be a large assembly of young bees flying round the entrance. This swarm was hived all on drawn-out combs, and the queen did not have to wait long before starting with eggs; two brood chambers of young bees, surplus must be harvested fast, they began in them directly the great heat on the top of glass showed numbers and activity.

Two other hives which have not swarmed have only filled one rack of sections each, while others have five. One of them 2-lb. sections. Two of them I found queenless in early June, no brood at all in any of the cells. I gave each a comb of brood from another stock, and found a queen on this the next week. This one must have reared a queen and I missed seeing her.

Mr. Garrett told me of a lady who sent down for him. An *expert* had told her there was no queen in the hive. When he went up the bees were carrying pollen; it was cold, and very boisterous, and he would not open the hive; but the next day was warm, so he opened it and found both eggs and very young brood. It proves how difficult it is to spot the young dark queens, but the lady's so-called *expert* was sadly let down: it proves "a little learning is a dangerous thing." It shows that taking out all-queen cells when placing on sections in early May is not always wise; the workers had decided that the old queen was to be superseded. They could only have raised one from the last eggs she deposited before she was dethroned, as all cells were emptied of young bees and the young one had not begun to deposit eggs, but as soon as a comb of eggs and brood was given she at once took possession of it. They were immensely strong; they have had to go on again with their new queen, they had not attempted to raise one on the new comb.

One visitor told me how the bees superseded an imported queen before she had been there three months. He found her laid out on the alighting board, but they had raised another Italian, which kept the same markings in the young bees. The more one works with them the more one sees that these workers decide for themselves what they will have in their colonies. Whether the cold time has had anything to do with this I cannot say, but we know if bees are determined to dethrone their queen it must be when they have the males in the hive. If there "is no time in the forest," as Shakespeare wrote, the bees have none in the hive. Their time is sun and warmth.

We are reaping the reward from the bees in the harvest of fruit—rasps at 1s. 6d. per lb. wholesale. Bees are on the new flowers as the women and children pick off the ripe berries. Pears and apples are both getting colour and size, all tell of harvests to come. Black currants are a rich sight to see; a 7-acre field of them which last year gave a heavy crop, this year will be about double in weight. It is strange that this should be a favour'd fruit in our country, but is of no value in America; they think that the red one is superior, that is what the visitors tell me. They are worth £10 per line to me; *they would not be worth* 10 *cents. in Amuriker*," as the visitors pronounced it.

Our visitors from the other side are very interesting in their yarns about bees, as are visitors from this side. Mr. Hawkins, of Reigate, came a few weeks since. Mr. Hill, of Derby, comes next week. I hope they will not be disappointed, but the bees, the fruit and the cows all seem to interest them. How quickly they spot the cows that have a pedigree strain, especially those from over the other side. Some of them are over for the Royal Show at Cambridge this week, and will be buyers of the best to take back to America. (I hope our bee-people will be well represented; they are sure to be there.) There should be plenty of honey to exhibit. A lady visitor came up on Thursday who took the first prize for sections in Bournemouth, she told me she had passed the final examination with Mr. J. Barrett, of Pinner, a few weeks back. All honour to them. I could not get through the intermediate exam. last November. Am glad that others are more fortunate. It shows that the interest in the craft is increasing; people are finding pleasure in keeping bees, as well as profit to themselves.—J. J. KETTLE.

Jottings from Huntingdonshire

Winds and showers, rain and squalls, all signs that England is being swept by a cyclone, have kept more bees within the hives than is good. Not only does it mean a raid on the stores, but often in the cold evenings the bees have forsaken the supers and the hatching forth of thousands of young bees so crowds the brood-nest that half an hour of sunshine will bring out swarms. If they are taken and hived, liberal feeding must be resorted to, unless it is possible to take combs of sealed honey from other stocks. This often works well. A comb of brood and honey taken from ten stocks and frames of foundation put in their place will give extra room to the over-crowded stocks and ensure food in plenty for the hived swarm. I find a swarm so hived will take to supers immediately if well wrapped down and around, sections especially.

This severe check in the honey flow will soon be made up if we get a spell of warm, sunny days. As far as the flow of the countryside is concerned, there is nectar in abundance waiting to be got. We are fortunate here in having plenty of white clover in vigorous growth. The lime trees, too, are at their best; mustard is blooming well, and the brambles have commenced to flower. It will be passing sad if all this nectar perishes for want of warmth. I note the wind is working towards the west after being south-west for so many days that the weathercock on the steeple top must be tired of looking in one direction.

The refreshing rains which have fallen will do much good, although those farmers who have hay lying in the fields will be all a-frown while, at the same time, they try to smile as their roots flourish as a result of the moisture which has fallen. Needless to say, the Dutch bees are very much at home, and in weather such as this they go bustling in and out while the others restlessly crawl about the hive entrances longing for a glimpse of the sun. Well, cheerio! there's time yet. July is young, and who knows, a month hence our hives may be the heavier by 30 or 40 lbs. We all know that the most sluggish of bees prefer to out and about, so let us exercise our patience and wait a wee.—E. F. HEMMING.

Week-End Bee-Keeping.

By S. H. SMITH.

(*Continued from page* 316.)

"As I do not intend to give a lecture, but only an informal bee-talk, please make as many interruptions as you like, and put questions at any time."

As I turned to the blackboard there issued from the kitchen department pleasing, melodious sounds. A good contralto voice was singing:

"Come down to Kew in lilac-time,
In lilac-time, in lilac-time."

The twins whooped and bolted to the kitchen. D. B. said, "Thank goodness! we shall get a decent breakfast to-morrow morning." Mrs. D. B. asked if I had used any magic on Freda. "We thought we should either have to lose the bees or Freda," she explained.

I cautiously advanced the opinion that it was only the natural reaction of youth and health working in Freda, and, picking up a piece of chalk, I faced the blackboard.

"Those figures look a bit crude, so I'll rub them out and substitute the following equation:—

$$C = B + A"$$

Inadvertently I was using a piece of blue chalk. It seemed a good omen.

"Now it may appear strange to bring algebraic formulæ into bee-talk, but they save words and make things more understandable. The signs above mean that C, the cost, equals B, the bees, plus A, the appliances.

It does not matter much to the expert what he pays, within reason, for good bees. You will always find him using simple appliances. He can generally obtain good results in any season. With the amateur it is different. Thousands of amateurs pay good money yearly for bees and appliances, and then lose the bees and their money. There is something wrong with their equations.

Of course, with luck some honey, H, will be obtained. Any honey sold or used in the amateur's family will show on the right side. This, as stated before, is figured in the books as about £1 per bee stock. And this apparently satisfied the before-the-war amateur bee-keeper—when he got it. His equation would, therefore, read:

$$C = B + A + H.$$

I shall attempt to prove that this equation is wrong.

Most of us absorb a little elementary chemistry during our schooldays, so I'll not

apologise for chalking up the following simple formula:

$$2H_2+O_2=2H_2O$$

This means, of course, that two gramme molecule of hydrogen, H_2, and one gramme molecule of oxygen O_2 unite to form two gramme molecules of water vapour H_2O.

Generations of chemists have accepted this equation. At any time, or at any season it can be experimentally proven that 4 parts of hydrogen and 32 parts of oxygen combine to form 36 parts of water vapour.

All the same, the equation is not complete, no more than the equation of the amateur bee-keeper. In the text-books of to-morrow, if not of to-day, you will find the correction. Modern chemistry now writes it:

$$2H_2+O_2=2H_2O+293.000 \text{ J.}$$

The explanation is that the matter, plus the energy of 2 *gramme molecules of hydrogen*, and the matter *plus the energy of* 1 gramme molecule of oxygen combine to the matter *plus the energy of* 2 gramme molecules of water vapour plus 293,000 joules, or units, of *free energy*

For a hundred years chemists figured only the material transformation as per our first chemical equation, and overlooked the energy transformation involved. Yet every time the experiment was made the 293,000 J. of energy made itself felt as flame, heat, or mechanical force. Often the container in which the experiment was made was shattered to pieces. But this energy display was considered only incidental, as no matter was lost.

Only lately have chemists realised that this energy is entity energy, as indestructible and permanent as entity matter, and that co-incident with every transformation of matter is a transformation of energy. Either involves the other, both are indissoluble from each other, and both are different aspects of the same phenomenon. Naturally the 293.000 J. will not always appear as prominently in every transformation as it does in the one selected to illustrate it.

All this may be very interesting, if true, but you may well ask what has it to do with bees?

Well, by applying the principles that govern the elementary chemical illustration to bee-keeping, a light will shine out. Our bee-keeping equation should be written:

$$C=(A+B)x$$

This x is the entity energy inherent in a strong bee stock. Utilise it by employing the right methods and appliances and you concentrate its power so that it works not by addition, but by multiplication. Unlike the chemical equation, it will not give uniform results all the time. But much may be done in suitable locations, under efficient management, in favourable seasons, etc. Let us express all these factors by y and our formula reads:

$$C=(A+B)xy.$$

There is yet another force or power necessary for success in the enterprise, z, representing the goodwill of your helpers, neighbours, etc. In this garden it means all the household, the family, and servants, indoor or out. Our final equation will therefore read:

$$C=(A+B)xyz.$$

The twins had come back and were looking at the formulæ and whispering to their mother.

"We know now who you are, Mr. Week-End," said Mrs. D. B. "You are the man who advertised a riddle about the weight of a swarm of bees. The children answered it correctly, but they received no prize."

D. B. laughed. I dropped the chalk and murmured something that must have sounded like "show me." The twins were at the blackboard in a trice. One talked, the other drew the figures.

"A cat weighs 5 lbs. and half its own weight, Mr. Week-End. How much does the cat weigh?" Before I could open my mouth they had it down in black-and-white. "Let x represent the weight of the cat," said Beryll, "then $x=\frac{x}{2}+5$, and therefore $x=10$."

"There's your old cat," said D.B., "your entire cat, Week-End. Now, for goodness sake break away from that blackboard and let us sit and smoke in comfort under the trees."

(To be continued.)

Jottings from Ashdown Forest

How doth the busy bee, etc. . . . but who ever put anything into beautiful wording about the busyness of the bee-keepers? Never mind, the summer is here and bee-keepers have to be busy. Swarms, and again swarms, is the general complaint, or rather the decamping propensity of most people's bees.

Last summer we had a controversy under "Is it playing the game?" in which I joined, admitting I might be the greatest sinner. This year my claim is being maintained, for I have secured more swarms than I have been called upon to hive, both at home and for my clients. Many of my clients don't quite understand it, but appear to appreciate finding what was an empty hive has got bees going hard; but when I go and, instead of getting honey, the bees have swarmed and no honey to be expected for some time, it is another matter.

I had hoped my last contribution would have brought controversy on the question of swarming, but it does not seem we are getting much "forrarder."

Rev. Hemming, on June 22, touches on swarming, but not on the lines I hoped for. His contribution re the *Daily Mail* I am in agreement with, and though I take and read the paper I would like them to be more accurate in what they publish respecting bees. Doubtless they desire to foster the bee-keeping industry. Myself I have yet to prove a statement recently to the effect a bee gorged with honey could not bend itself into the position necessary to insert its sting. My own experience lately has been that, instead of being unable to bend themselves to insert their sting, they have a most marvellous ability and determination to do so. I consider it is simply

sultry or thundery weather, and they are very cross, "vile to deal with."

A few sections have been secured, but nothing of importance. Shallow combs, very few yet fully sealed; though what extracting I have done the honey has been of a very excellent appearance, and, to go back to the bubble test, very dense.

Re sending bees packed without any ventilation, I have had more experience this hot weather. A client wished to send a stock wintered in a taper butter box a long distance. Being a strong lot with a lot of new unsealed honey I did have fears, after despatching by rail, fearing the honey would run out and drown them, as they were inverted, wedges of grass placed between combs and cover tightly screwed on, then placed in another larger case lightly packed and nailed down they went through all right.

A B.B.J. advertiser bought five seven-frame stocks from me. They did a 201-mile rail journey; the purchaser highly satisfied.

Summer outing for bee-keepers, under Editorial, June 22.—I have known and had experience with bees there long before Mr. and Mrs. Anderson came, though not since. It is a most picturesque place, and the journey by road should be delightful; but what is the object of the gathering? Is it a B.B.K.A. gathering, with lectures and demonstrations, or simply a delightful impromptu gathering of bee-keepers in general? Probably next issue of "B.B.J." will tell us more about it.

[We have not a full programme of the meeting, but we believe it is an impromptu gathering, though possibly short "talks" on bee matters may be arranged, and an examination for preliminary certificates is to be held. It is not a B.B.K.A. gathering.—EDS.]

Strawberries with new honey.—It is now a good many years since I chanced to hit on trying a strawberry dipped in honey, and found it was simply delicious. I have had the pleasure of giving many people one of the pleasures of their life since by giving them a good feed of strawberries with a saucer of honey to dip them in. It is astonishing how many most people can enjoy and *not* feel bad afterwards. Raspberries, and even the vilely sour loganberries are also good with honey. Commercially the proposition is not good, as generally strawberries are all over before the new honey is to be had. This year there should be honey available. May the Old Hermitage gathering put it to the test.—A. J. RIDLEY.

Canada and Bees

The High Commissioner for Canada is notified by the Minister of Agriculture at Ottawa that an Order has been passed, with effect on and from May 1, prohibiting the importation into Canada of bees, used or second-hand hives, or raw hive goods or products, excepting honey or wax, from the Continent of Europe owing to the danger of introducing the disease known as "Isle of Wight" disease.—From the *Financial News*.

Heather Tips.

By D. WILSON.

It seems early (June 24) to be talking about going to the heather, that particular time which is the day of all days in the year to some bee-keepers; but, though early, it is none too early. In fact, if you intended to go to the moors this year (1922), you should have been making plans for the journey last year (1921).

It is not an undertaking to be entered into lightly; you cannot just say to-night, "We will go to the heather to-morrow." It requires deep thought, care and long preparation. I do not know anything which will teach a man so much as a journey to the moors with his bees. I question whether he fully knows what bee-keeping is until he has had at least one journey to the hills. Then he will come back a wiser man, recognising that he has still much to learn.

After sixteen years or more of experience, I can say that I have been through it all. I have had losses and delays and accidents and other misfortunes to contend with, and it is the experience gained from these that I am going to try to give for the benefit of those who may feel tempted to try their fortune in producing heather-honey. There is no other aspect of bee-keeping, Mr. Editor, on which I feel that I can lay down the law so well as I can with regard to this subject; and if the "ego" appears a great deal in this little article I must ask your indulgence. It is not often I offend.

By careful attention to a few points to be laid down I hope my bee-keeping friends may obtain profit. Now, do not think that the heterogeneous collection of hives in your bee-garden, though most efficient for honey production at home, is of any use on the moor. Do not think that your favourite hive, the W.B.C., is of any use either. They cannot well be transported from home to the heather. Though, at a pinch, and by the dint of great care, you may make any of your hives available for transportation and heather work, you will soon begin to revise ideas in the light of two or three requirements.

First is needed a hive that can be quickly closed up for moving away, and that when closed will allow ample ventilation to stocks simply overflowing with bees. It should not take up much floor space either, as every inch of room on your lorry or dray is valuable. It should have no legs. This you will soon find out on your first journey, for a hive on legs rocks and swings so much when being moved on a vehicle at any speed that every minute you will think it is going to overturn. But remember that when placed on the moor it must have something to stand on and not rest with its floor board on the bare ground.

Next remember that although you are taking hives perhaps as full of bees as they have been at any time in the year, yet the great breeding season has passed and the brood-nest is beginning to contract, and the bees themselves are beginning to draw

more closely together, and there is a great danger that they will not work in supers.

Therefore, they must be made to enter the supers by contracting the brood-nest. I am of opinion that eight brood combs are ample for the moors, and am making arrangements accordingly this time. The eight frames of comb taken shall have the minimum of honey and the maximum quantity of brood. By arranging them in the hives so that the young brood and eggs are on the outer combs and the older hatching brood in the inner combs, you will reserve to yourself three weeks during which honey must be put upstairs.

Carry the supers in position on the hive. This will give more room for the bees during the journey, and they will not get overheated so rapidly.

See that all combs are well wired in before trusting them to travel. Of course, if not done, it cannot be done now, but you must not take such as are unwired and unnailed.

Having made such preliminary arrangements as seem and are necessary, and having the right type of hive, the next thing is to see about the journey. Find out some farmer or cottager on or near the moors who will allow you standing room for your hives. This can generally be obtained for a nominal fee. Arrange to have notice when the heather is coming into bloom. Then arrange for your transport. I have tried horses and ponies and motors, and now I vote for the motor every time. A Ford ton lorry is the thing. It is faster and stronger than a horse, and does not jib at the last, longest and steepest hill; and a three hours' horse journey can easily be done in the one hour. Besides that, whoever heard of bees stinging a Ford lorry? This question—that of safety—has to be considered when moving bees, and if they are behind a horse, be they packed ever so well, there is always the fear of an accident, the loss of the animal, and a pretty bill for damages.

When all preliminary arrangements are complete and when the heather is coming into bloom, then, if your bees are not in their heather hives, transfer them. Close them in the evening before you decide to move, and see that ventilation is ample. Then move early in the morning. I think six o'clock quite early enough, as I can be on the moors, seventeen miles away, by about seven o'clock, that is—before the heat of the day. Having arrived there they can be unloaded, placed on their permanent stands, opened out and covered up snugly in a few minutes, and you can be away again and home for breakfast. Perhaps you would prefer to stay and see the glories of the moors, but that is another tale.

One thing I ought to mention about packing on the conveyance—I have always taken it as a golden rule in travelling bees that if the hives require roping to keep them on I had better not travel at all, but stay at home.

Bees visit each other very much on the heather, so that if the hives are placed in a row you will find that your end hives will have all the honey and all the bees. If you are really requiring supers of heather honey, I do not know whether it is not wise to take advantage of this fact and arrange accordingly. But see that no other bee-keeper comes along and places his hive at the end of your row. Of course, you will not try to do it on someone else.

It is almost useless to expect bees to draw out foundation during August or early September, so you must see that you supply plenty of drawn-out comb in the supers and drawn-out sections, too, if you require section-honey. I mention this, although my friend, Mr. Tom Sleight, tells me that he had foundation worked in sections in September, 1920. But this is exceptional.

Is it necessary to visit bees on the moors? Perhaps not, until you bring them back; but I like to do so, and so will you. By so doing you can correct any little faults you may find, and if one colony is becoming honey-bound you can relieve it of a few of its combs. You will learn a great deal of bee-keeping not learnt elsewhere, and you will thoroughly enjoy each visit—if fine.

What remains? You can only leave the weather and the honey-flow to Providence, and hope and pray for the good time which, I hope, you will have.—D. WILSON.

Summer Days.

Here you should sit, beside the hives,
Watched o'er by solemn apple trees,
And study the busy lives—
The ceaseless bustle of the bees.

When lilac clusters break and soar,
And roses fair their blossoms spread,
And all the summer's flowery floor
With bud and star is carpeted.

Then every wind that set a course
Carries a fleet of plundering bees;
The yellow blossoms of the gorse,
The snowy blooms of orchard trees

Hum with the glad contented sound
That lifts and falls, that fades and grows;
A web of song, 'twixt sky and ground,
Sung through a thousand honey-flows.

From dawn to dusk these galleons sail
Across the fields to flowers afar,
Weathering many a scented gale,
And crossing many a danger-bar.

Ever returning with a freight,
Shining and precious, to be stored
Among the combs, already great
And glistening with the golden hoard.

The wooden hives stand all a-row,
Wrapped in a solitude supreme,
Where branches sway, and flowers blow
And summer passes in a dream.

This is contentment, this is peace,
Here let him rest, the man that strives,
Soothed by the humming of the bees,
The ceaseless murmur of the hives.

ELIZABETH S. FLEMING.

North Cheshire Chat.

Since my last notes were written the weather has undergone a complete change. From heat and drought we have come to rain and cold. For nearly a fortnight the balance of the hive has been on the wrong side. Expenditure has been more than receipts. As the Editor has it in last week's "Hints," swarms and nuclei will need care in the matter of feeding. This afternoon I found a small swarm in my garden hedge. As they were near my own hives presumably they came from them; but the weather is such that I dare not examine to find out, so shall confine them for the night and hope for a better chance to-morrow. It rained heavily in the forenoon; to-night it rains again, and has been blowing a gale all day. I expected a virgin queen about this time to be out for mating, so suspect it is her ladyship accompanied by some of her subjects who has taken so unauspicious an occasion for her trip. I was clipping the hedge, and had almost clipped the swarm before I noticed them; they were hanging in so close and inert a mass. Very little surplus has been gathered so far, but given a month's favourable weather we may even yet get a respectable "take," as the white clover is now blooming profusely, and the blackberries have yet to come.—D. J. HEMMING, Appleton, Warrington, July 1.

Odds and Ends and Questions.

Weather has broken at last indefinitely in our part of Scotland, but a good weight of dark honey has been gathered from fruit, hawthorn, and sycamore (or, as we call it here, plane trees). This does not happen regularly in Scotland. I would say, roughly speaking, perhaps three or four times in the last twenty years. I speak for our own district at any rate.

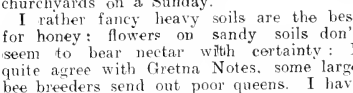
Your correspondent, D. Wilson, on page 304, "B.B.J.," June 22, asks if bees do gather honey from hawthorn. I beg to add my humble testimony that I have seen them in goodly numbers, and a neighbour beeman, who has this year specially studied the gathering from hawthorn, tells me of the goodly numbers to be found on the hedges at certain times of the day when conditions are favourable, but my strongest evidence, apart from personally seeing the bees on the flowers, is the smell at the hive entrances those fine evenings at the beginning of June is *proof positive*, I think it seems to be a source from which bees gather with great ease. They don't seem to require long to extract their toll from each bloom, and they often crawl from bloom to bloom without rising or making any noise, which perhaps explains some of the difference of opinion which exists about the yield from this source.

Honey prices, etc.—I think your correspondent (D. J. Hemming, page 305) is right about the present honey prices, they are too high and will certainly require to come down. I think 1s. 6d. or 1s. 9d. would be an excellent price for either extracted or sections *retail*, but one item that would require to come down from the appliance folks is *sections*. Foundation has come down wonderfully in price, and also hives, but not sections. Last year in our neighbourhood these were being sold at 14s. or 15s. per hundred, nearly five times pre-war price. I suppose the price this season is to be less, 11s. 6d. per hundred, but not low enough yet. Why? One wonders. Nothing apparently to explain it. Captain Dutchman's suggestion of being able to buy direct from America at one-third less is certainly enough to cause uneasiness. Have you, Mr. Editor, or any of your readers, had any experience of young queens who have been mated afterwards taking short flights out? I have made observations just lately which lead me almost to this conclusion, that they do sometimes, contra to text-book teaching, but would like to have further conclusive evidence before making any statement.—"AYRSHIRE."

Norwich Notes and Notions.

The season here opened with good prospects. Alas! the scene has changed, swarms have been in plenty, many taking a liking to churchyards on a Sunday.

I rather fancy heavy soils are the best for honey: flowers on sandy soils don't seem to bear nectar with certainty: I quite agree with Gretna Notes, some large bee breeders send out poor queens. I have had my fill in the past. A competition for the finest all-round queens would help the craft if it could be arranged. I am sticking to my own in future, although I believe a stingy stock that kills rats, chickens, etc., is the best for wintering; they consume little stores and turn up strong early. These are the joy of the old veterans—but no thanks, not for me.—A. TROWSE, Eade Road, Norwich.



Prices.

[10664] I noticed in your May 4 issue a complaint from Capt. Dutchman in regard to the price of bee appliances. In the issue for June 22 there is a slight reference to the subject by D. J. Hemming. Now I think this is one of the most serious drawbacks that our hobby or profession (whichever it may be) is suffering from to-day. May I put it that we seem to be suffering from the effects of a ring or combine of dealers and manufacturers? I don't know that this is the case, but I certainly do know that the days of competitive prices have gone. We can't expect beekeeping to make progress while suffering from the high prices ruling

to-day. There seems to be no desire to cut prices on the part of the various appliance firms, and I feel sure the average man's pocket will not let him keep more than an odd stock or two because the first cost is too high. There are scores of bee-keepers whose bees were wiped out by I.O.W. disease, who now wish to start again, but when they see a list they either give up the thought, or just get an odd hive (an old one at that if possible), and potter away. Can anyone, more able than I am, suggest any remedy? We don't want to support any combines. Surely it is not necessary to pay 312 per cent. above pre war for sections, or 196 per cent. for frames. From the small response to Capt. Dutchman's appeal there has not been a very enthusiastic reception, but I know beekeepers in this district have felt the high prices very keenly. We are given to understand the cost of living is now roughly 80 per cent. above pre war. Surely 312 per cent. justifies Capt. Dutchman's *kindly* description of wholesale profiteering. The great scourge, I.O.W disease, has abated and the press is booming beekeeping. We have ex-soldiers who have invested capital in beekeeping with a view to getting a living. How can these men get the support they deserve from the bee-keeping public for nuclei and stocks when appliances are at a premium as they are to-day? Surely the matter is vital enough for the beekeeping press to take up. Look at the effect on prices when the daily press started their campaign. I wish we had more men like Capt. Dutchman who would speak out; the scandal has gone on quite long enough. I may say in conclusion I quite agree with Mr. Hemming as to lower prices for honey, in fact *less* ought to be the rule; the man in the street can't pay fancy prices to-day. May I add my appeal to brother beekeepers to help to get prices down and help the grand old craft along? I certainly believe in unity, but not for the purpose of exploitation.—HERBERT BLAND.

Co-Operation in New Zealand.

[10665] We note that Mr. D. J. Hemming, Warrington, advocates co-operation amongst British bee-keepers, in connection with dealing with bee goods and bee appliances. It will interest your readers to know that the New Zealand Co-operative Honey Producers' Association have recently purchased the Alliance Box Co., Ltd., in New Zealand, for the purpose of making their own appliances and bee-keepers' supplies. Hitherto, bee-keepers' supplies were purchased in England, Australia, and America, and it is now hoped that the new departure will enable the honey producers of New Zealand to manufacture their own supplies, and distribute them amongst themselves at cost price. Wishing your Journal every success. —R. S. SPINLER.

New Zealand Co-operative Honey Producers' Association, Ltd.

A Mead Story.

By W. B. K.

Once upon a time, before the Langstroth hives were in common use, Mr. X owned an up-country store. Customers, close by, were few, so he left his wife in charge, and with a large van full of a varied assortment of goods made a weekly call at all the farm houses within a day's journey from his head-quarters. The country folks were hospitable, and, as he usually arrived at Mrs. Y's in the afternoon, he was grateful for a cup of tea.

One day, however, he refused the tea. He had had a glass of mead from Mrs. Z. Next week it was the same story; he had never tasted anything so good—he must really ask her for the recipe. On his next trip he did so.

She told him she strained the honey out first, then crushed the combs well and put them into a tub of water to soak all the remaining sweetness out. "But I will show you," she said.

She took him into the house and into her son's room. From underneath the bed she drew out an ancient tub. With a sweep of her hand, she stirred round the mass of squashed brood, dead bees, flies, etc.

Next time Mr. X called on Mrs. Y he humbly accepted a cup of tea.—From the *New Zealand Bee-keepers' Journal.*

Bee Shows to Come.

A nominal charge of 2s. 6d. is made for notices (not exceeding 7 lines) in this column, 10 lines charged 3s. 6d. up to 15 lines 5s., which covers cost of insertion from order till date of show. Cash should accompany orders for insertion.

Royal Show, Cambridge, July 4 to 8.—Over £40 in prizes. All classes open.—Schedules and all information from Mr. E. C. R. Holloway, Burwell, near Cambridge. **Entries closed.**

July 19.—Wickham Bishops and District Bee-keepers' Co-operative Association, in connection with Flower Show.—Three classes open to bee-keepers resident in Essex and one class open to residents in the British Isles. Prizes up to £1 1s. Entrance fee 6d. per class.—For Schedules apply, enclosing stamp, to R. A. Pelly, Wickham Bishops, Essex. **Entries close on July 12.**

July 19 and 20.—Warwickshire Bee-keepers' Association, in connection with the Warwickshire Agricultural Society's Show at Nuneaton. Open Classes for Honey, Wax, Hives and Bee Appliances. —Schedules from Secretary, Geo. Franklin, Burton Green, Kenilworth. **Entries close July 10.**

July 20 and 21.—Lincolnshire Bee-keepers' Association Show of Honey, Wax, Hives, Appliances, etc., at Skegness. Over £30 in prizes. Open and County Classes.—Schedules and Entry Forms from Major J. H. Hadfield, Alford, Lincs. **Entries close on June 19.**

July 22.—Wyke, Normandy and District Horticultural Society's Annual Show. Honey: 6 Classes (Sections and Extracted), Open; Honey: 4 Classes (Sections and Extracted), Local; 1 Class Wax, Open. The Surrey Bee-keepers' Association offers to duplicate all first prizes in open section (Class 86 excepted).—For further particulars and Schedules apply to Hon. Sec., F. G. Kennard, Pirbright Road, Normandy.

July 22, at Mill Hill, N.W.—In connection with the Flower, Fruit and Vegetable Show, under the auspices of Hale and District Allotment Association. Classes for honey and wax exhibits for competition.—Schedules are ready, and may be obtained by sending stamped, addressed enve-

lope to the Hon. Secretary, Mr. A. Bacon, Yew bank, Tennyson Road, Mill Hill, N.W.7. **Entries close July 15.**

July 26, 1922.—The Honey Show of the Wallop Horticultural and Floral Society have District and Open Classes for Sections and Extracted Honey.—Apply for Schedules to Mr. P. E. Roberts, School House, Nether Wallop, Hants.—**Entries close July 19.**

July 26-27, at Cardiff, Sophia Gardens.—Glamorgan Bee-keepers Association, in connection with Cardiff and County Horticultural Society's Show. Open Classes. Special prizes: Taylor's W.B.C. Hive and Apis Club Bronze Medal.—Schedules from Secretary, Chas. F. Davies, 5, Borstal Avenue, Cardiff

August Bank Holiday.—Cambridge Mammoth Show. Open Classes. Special one bottle and one section class.—Schedules from Mr. E. C. R. Holloway, Burwell, near Cambridge.

August 3, at Uttoxeter.—Staffordshire Bee-keepers' Association, in conjunction with Staffs. Agricultural Society. Seven silver, six bronze medals, are offered, including B.B.K.A., Staffs. B.K.A., Staffs. Agricultural Society, and Uttoxeter Agricultural Society. Liberal prize money.—Schedules and Entry Forms from W. Griffiths, Solway House, Queensville, Stafford. **Entries close July 15.**

August 19, at Carmarthen.—Carmarthenshire B.K.A. Show. Good Classes of Honey, Wax, etc. Members' and Open Classes. Valuable prizes, including the Apis Club Silver Medal and the B.B.K.A. Silver and Bronze Medals. **Entries close August 12.** Schedules from H. Tew, Priory Street, Carmarthen.

August 19 and 21, Cannock Show.—Sixteen Classes for Honey (nine Open). Good Prizes Schedules from Jno. Bird, Secretary, Stafford Road, Cannock, Staffs.

August 23, at Bartley Cross.—New Forest B.K.A., in connection with the New Forest Agricultural and Horticultural Association. Open and Local Classes for Honey and Appliances.—Schedules from Mr. W. Cooper, Marley House, Netley Marsh, Southampton. **Entries close August 6.**

August 26, at Hinckley, in connection with the Hinckley Sweet Pea and Rose Society's Annual Show.—Open to all bee-keepers. First prize, 12s. 6d.; second price, 7s. 6d.; and third prize, 4s.—Schedules are ready, and may be obtained by sending stamped, addressed envelope to the Hon. Secretary, A. Kimbrell, 119, Clarendon Road, Hinckley, Leicestershire. **Entries close August 21, 1922.**

August 31, 1922.—Winchester Domestic Live Stock Association Show. Schedule of Honey Classes Open:—Class 5, one shallow frame: Class 6, six sections of 1922 honey; Class 7, six 1-lb. screw stoppered bottles of 1922 honey; Class 8, trophy of bee products to be arranged on table space 3 ft. by 3 ft.—Entry Forms to be obtained from M. W. Castle, 80, High Street, Winchester.

September 2.—Peterborough, Oundle and District Bee-keepers' Association. Show of honey, Co-operative Hall, Peterborough. Members and Open Classes. Open (entry fee 2s.), 12 bottles Extracted Light Honey, first prize, £1 10s.; second, £1; third, 10s. Gift Class (entry free). Bottle Extracted Honey to be sold for N.U.R. Orphan Fund. First prize, W.B.C. hive; second, Appliances 15s.; third, 7s. 6d.—Schedules and Entry Forms, G. H. Seamer, Hon. Sec., Waterloo Road, Peterborough. **Closing date, August 19, 1922.**

September 9.—Middlesex Bee-keepers' Association, in conjunction with the Brentford Allotments Association Annual Show, at the Wesleyan School Hall, Clifden Road, Brentford. Twelve Open Classes for Honey, Wax, etc.—Schedules and Entry Forms from R. R. Babbage, 33, Whitestile Road, Brentford, Middlesex.

September 16 to 22.—British Bee-keepers' Association Annual Show at Grocers' Exhibition, Royal Agricultural Hall, Islington, London.—Schedules from Hon. Secretary, B.B.K.A., 23, Bedford Street, Strand, London, W.C.2. **Entries close certain September 4.**

October 12, at Ongar, in connection with the Ongar and District Agricultural Association.—Extracted and Comb Honey. Open to Essex.—Schedules from G. A. Taylor, Hon. Sec., Ongar and District Bee-keepers' Association, Ashcroft, Ongar.

Special Prepaid Advertisements.

One Penny per Word.

Trade *advertisements of Bees, Honey, Queens, and Bee goods are not permissible at above rate, but will be inserted at* **1½d.** *per word as* **"Business"** *Announcements, immediately under the Private Advertisements. Advertisements of Hive-manufacturers can only be inserted at a minimum charge of 6s. per inch, or 12s. per inch.*

PRIVATE ADVERTISEMENTS are only intended for readers having **Surplus Stock** *to dispose of.* **Driven Bees, Nuclei,** *and* **Queens that are reared or imported for sale,** *are Trade Advertisements, and can only be accepted under trade terms. A charge of 6d. extra per insertion will be made if a box number is used.*

Orders for three or more consecutive insertions in "The Bee Journal" entitle advertisers to one insertion in "The Bee-Keepers' Record" free of charge.

PRIVATE ADVERTISEMENTS.

WANTED, Plate Glass and Base for honey trophy.—Price and particulars to Box 85, B.B.J. Office, 23, Bedford Street, Strand, London, W.C.2. g.18

SEVERAL STOCKS OF BEES, 10 frames, 1922 Queens, packed brood and bees ready for the heather; will undertake them going to heather; will sell with or without hive.—GREEN, Greaves Street, Ripley, Derby. g.2

FOR SALE, Nicolson Observatory Hive with turntable, NEW, takes standard frame, 45s., or highest offer.—MATTHEW LITTLE, 33, Eskdale Street, Langholm. g.3

A BARGAIN.—Six strong, healthy Stocks, Italian Hybrids, 8 frames, 45s. each, or nearest offer. Inspection invited. Purchaser to supply travelling boxes.—MOSS, 12, Park Street, Cambridge. g.4

PURE ITALIANS, 1922 Penna imported Queens (none better), 6 frames, 40s.; 8, 45s., 10, 50s.; carriage paid 50 miles; boxes returnable (over-stocked; must clear).—WADHAM, Gold Street, Cardiff. r.g.6

GEARED EXTRACTOR and Ripener for Sale; never used.—HULBERT, "Chalet," Warwick Road, Olton, Birmingham. g.6

BEES.—Surplus for Sale, Dutch, Golden, Italian, on 4, 6 or 8 frames, 35s., 60s., 80s.; good Hives, 30s., 40s.; f.o.r.—J. A. WOOD, 4, Lawson Road, Sheffield. g.7

1922 JAN STRGAR or Penna Queen on 4 frames, 37s. 6d.; box 5s., returnable.—P. B., Althorpe Road, Luton. g.8

MUST SELL.—Healthy Stock, 10 standard frames, with hive, double brood chamber, £3 10s., carriage paid.—COX, 116, Addison Road, King's Heath. g.9

CARNIOLAN STOCK, 10 frames, £4, carriage paid. Queen is worth the money for perpetuation.—TROWSE, 51, Eade Road, Norwich. g.10

TWO W.B.C. HIVES, with supers and section racks, never used, 30s. each, or nearest offer; also two Swarms on 6 frames, £2 each.—GEORGE STORE, Bloy Street, Easton, Bristol. g.11

BEAUTIFUL ½-plate Sanderson "Junior" Stand Camera, "Ensign" symmetrical lens, Thornton-Pickard shutter, tripod, 3 D.D. slides, canvas case, developing dishes, printing frames, etc., sell £5 10s., or exchange Nuclei with 1922 Queens, to same value. Box 85, B.B.J. Office, 23, Bedford Street, Strand, W.C.2. g.13

WANTED, small Pump for tank in greenhouse.—Price and particulars to W. HERROD-HEMPSALL, Luton, Beds f.10s

TWO S.-H. Standard Hives, two supers, 18s. 6d. each; one new ditto, one super, 25s.; one Honey Tin, wide spout, 5s.; Tin Feeders, etc.; disease unknown. Stamp reply.—WALKER, Woodfield Grove, Patricroft. g.14

STOCK on 8 commercial frames, Carniolan Hybrids, in good, sound hive, £4 17s. 6d.—STRATTON, Barn Lane, King's Heath, Birmingham. g.15

FOR SALE, two Dutch Skep Stocks, will soon swarm, 30s. each, carriage paid.—Box No. 33, 23, Bedford Street, Strand, London, W.C.2. g.16

ABOUT 28 good Stocks and few Swarms in good W.B.C., Lee, and other Hives, supered, with honey, good Extractor, £35 lot; too ill to attend. —GREEN, Bee-keeper, Laindon, Essex. g.24

FINEST ENGLISH HONEY, quality guaranteed, in 28-lb. tins, 1s. 3d. per lb.; tins free; f.o.r.—HARVEY, Apiarist, Andover. g.25

BEES FOR SALE, Stocks free from disease; good Queens.—FULLARTON, Memsie, Aberdeenshire. r.f.154

SWARMS BEES, £1, 25s. each, honeycombs 20s. dozen.—NORTH, Notley, Witham, Essex. f.175

OBSERVATORY HIVE for sale, mahogany, takes three standard frames and four sections or one shallow frame; complete with shutters; offered as a bargain.—MISS HART, 258, Stratford Road, Birmingham. f.179

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HONEY BOTTLES, tall, lowest prices; free delivery London, Hull, Dudley; Labels, sample 1d. stamp.—H. BUNNEY, Dudley. r.f.134

PRIME SWARMS from healthy stocks, June, 6s. per lb.; Stocks on frames, 7s. per frame; carriage forward; crates returnable.—CURTIS, The Limes, Holbeach. r.f.104

IMPORTED PENNA QUEENS, by return, 8s.; also few strong 3-frame Nuclei, Penna Queens, 30s.—STORE, Chelsea Road, Easton, Bristol. g.12

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YOUNG fertile honey getting Italian-Carniolan Queen on frame with bees, 12s. 6d., box 4s., returnable; six 5-frame Stocks, 40s. each.—BARRETT, Cecil Park, Pinner. r.f.155

HONEY wanted, any quantity in bulk up to 10 tons; must be guaranteed best English.—Box No. 82, B.B.J. Office, 23, Bedford Street, Strand, W.C.2. f.r.177

MODEL VERTICAL STEAM ENGINE for Sale, cylinder bore 1¼ in., stroke 1¼ in., slide valve, height 10 in., well made; also piece of 4-in. Copper Tube, sealed both ends, suitable for boiler, 35s. the lot; carriage extra; a bargain.—Box 79a, B.B.J. Office, 23, Bedford Street, Strand, W.C.2. f.141

SELL.—Rotax all-brass Motor Car Head Lamps, self-contained acetylene, very powerful, 30s. the pair; two small powerful Acetylene Brass Head Lamps, with separate generator, suitable light car or cycle car, £3 the set; Austin Rear Wind Screen, mahogany framework, £7; Mills' Automatic Acetylene Generating Plant, suitable for 10-roomed house, £6; quantity of Acetylene Gas Brackets and Chandeliers, prices with particulars; small folding Magic Lantern, 30s.; motor cycle all-rubber Ponco, reaches to ankles, wind- and weather-proof neck and sleeves, 50s.; all carriage forward.—HERROD-HEMPSALL, Old Bedford Road, Luton, Beds. c.77

STRICTLY BUSINESS.—One dozen Flavine—S B. Powders, 1s.; a Japanned Sprayer, 6s.; the Acarine 1921 Eclipse Pad, 2s. 6d.; all post paid.—S. H. SMITH, 30, Maid's Causeway, Cambridge.

W. DAVIDSON, Forest Road, Burton-on-Trent, at present in Holland, is buying Swarms Dutch Bees, returns about 11th, and can offer same established in skeps at 30s. per lot. g.17

QUEEN INTRODUCTION A CERTAINTY with Bowen's tested Cage, never fails, 2s. 6d. g.19

IMPROVED HONEY TINS, handles, bolted lids, 7 lbs., 10d.; 14 lbs., 1s. 2d.; 28 lbs., 1s. 9d.; carriage extra.—BOWEN. g.20

MARKETING SECTIONS.—Indispensable Cases, supersedes glazing, 2s. dozen, gross 19s., forward.—BOWEN, Coronation Road, Cheltenham. g.21

FERTILE QUEENS.—Italian, 8s.; Hybrid, 7s. 6d.—TICKELL, Queen Breeder, Westbourne Apiary, Cheltenham. g.22

"GRAFTON" QUEENS are always reliable.—Fertile Italians, 8s. 6d.; Virgins, 3s. 6d.—MASOM & HEDLEY, Grafton Regis, Stony Stratford, Bucks. g.23

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For best bees, queens and appliances come to PEARSON & GALE, Marlborough.

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One Young Pure Fertile Italian Queen	8/-	8/-	8/-

SPECIAL OFFERS, until countermanded, for queens in lots of 4 at a time: From July 1st to July 31st, **£1 4s.** Orders booked in rotation, cash with order, carriage paid, safe arrival guaranteed. Payment by cheques or British postal orders. International money orders are **not** accepted. **10%** discount to Apis Club members on my prices, **except** on "Special Offers."

FOR SALE.—8 Frame Stocks, 50s.; Hybrid Fertile Queens, 6s. 6d.—ASHWORTH, Pound Street, Warminster. f.148

GOLDEN ITALIAN QUEENS. These superior British-reared Queens need no recommendation; Fertiles 10s. 6d. in rotation. E. COOMBER, Specialist Breeder, 64, Ronald Park, Westcliff-on-Sea. f.170

BEES on well wired regular worker combs with 1922 Penna Italian Queens, 3 frames 37s. 6d., 8 frames £3 15s.; very strong with bees and brood, also on commercial frames; Hybrids at cheaper rates; boxes 10s., returnable.—D. M. CUTHBERTSON, Finmere, Buckingham.

REQUEEN this autumn with Buckfast Queens. Our customers declare them to be the finest obtainable. Prices for select Queens from mid-July to mid-August are as follows:—1-4 at 12s. 6d.; 5-9 at 12s.; 10 or more at 11s. Descriptive circular free on application.—Br. ADAM, The Abbey, Buckfast, S. Devon. r.f.176

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HYBRID-ITALIAN STOCKS on 8 frames, ready for supering, 60s.; on 10 frames, 72s.; Golden Nuclei, 3 frames, 35s.—LILLEY, Lamarsh, Bures. r.f.162

SPECIAL OFFER; OVERSTOCKED.—Stocks ten frames, headed 1922, tested Carniolan Queens (Strgar's Alpines), 85s.; Italians, 80s.; Hybrids, 75s.; Nuclei, 4-frame, 50s., 45s., 35s., 5 per cent. discount to members Apis Club; guaranteed healthy.—HOWLETT, Sylvabelle Apiary, Tring. f.163

TORTORA QUEENS.—Can deliver 10 to 14 days from ordering; July prices, 7s. 6d.; four, £1 4s.—HULBERT, "Châlet," Warwick Road, Olton, Birmingham.

TOOK.—Special offer. Nuclei with choice 1922 Italian Queens, 27s. 6d., carriage paid; box 10s. returnable.—HULBERT, Birmingham.

ITALIAN QUEENS, 10s. 6d. each, healthy and prolific; Nuclei, 4 frames 45s.; extra combs of brood, 7s. 6d. per frame; combless Bees, 10s. per lb.; Queen extra; day-old Virgins, 4s. 6d. Queens are bred from selected stocks for white combs, and are pure Italians. Send cash with order.—TATTERSALL WILLIAMS, The Apiary, Braunton, Devon. r.f.169

FINEST ENGLISH HONEY in 28-lb. cans, 1s. 4d. lb; tins and carriage free.—PEARSON & GALE, Marlborough, Wilts. r.f.171

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"WIGHT" AND "ACARINE" DISEASES.—Prevention and removal; invaluable advice; 5s. 6d. "An eye-opener."—ALF. RYALL, 8, Ospringe Road, N.W.5. r.c.87

4-FRAME Nuclei Travelling Boxes, 6s. each, carriage paid.—LEE, the Beeman, Burgess Hill, Sussex. r.f.99

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VIGOROUS fertile 1922 Queens for Sale, Swiss, Carniolan, or Italian, 9s. each, Virgins 6s.; also if ordered at once some strong Stocks for the heather, headed by guaranteed 1922 fertile Queens, delivery July.—DAVIDSON, Forest Road, Burton-on-Trent. r.f.98

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5S. 6D.—IMMUNE QUEENS.—COBB, 33, Bevan Road, Plumstead r.f.102

SURPLUS SWARMS AND NUCLEI of very best strains in Italian, Dutch and Hybrid; low prices.—WILKES, Expert, Pelsall, Walsall. r.f.45

THE finest 4-frame Nuclei procurable, headed by 1922 "Utility" or imported Italian Queen, 35s., carriage paid; box 10s., returnable.—LEE, the Beeman, Burgess Hill, Sussex. r.e.150

GUARANTEED GOOD NUCLEI, 25s., 3 frames; Virgin Queens, 4s.; Fertile Queens, 7s.—SMALL, Moorlands, Harpenden. r.f.121

BEES FROM HOLLAND. — Strong Dutch Swarms offered in original skeps (crates of 6 skeps), July, 30s.; packing and carriage paid; reductions for quantities.—HENK VAN LANGEVELD, Gasthuisringel 42 Rood, Holland. r.f.122

IMPORTED CARNIOLAN QUEENS.—Try the Manser breed; none better; July, 9s.—B. WOODLEY, Thorne, near Doncaster. f.112

BEES wanted. Queens for Sale, 7s. 6d. each.—BEE SUPPLIES & PRODUCTS ASSOCIATION, LTD., 39B, Wandle Road, S.W.17. f.47

BUYERS of Sections and English Run Honey are THE VIKING FOOD & ESSENCE CO., 12, Brandon Road, King's Cross, who will be pleased to purchase and receive offers. r.c.136

JACK TICKELL.—For Queens, Stocks and Nuclei. List free. — Westbourne Apiary, Cheltenham. r.a.54

BOOK NOW!—Choicest home-bred Carniolan Queens for 1922.—PEARSON & GALE, Marlborough. b.24

W. P. MEADOWS Syston, Leicester

New Hive Tool, Two Patterns, 2/6, 3/6

ITALIAN QUEENS by RETURN OF POST. Tested, 9s. 6d.; Untested, 4s. 6d.—PEARSON & GALE, Marlborough.

QUEENS, 10s.—PRYOR, Breachwood Green, Hertfordshire. r.f.106

DUTCH BEES.—Send for my artistically Illustrated Catalogue outlining my method of managing bees profitably. Read my notes on Queens and Queen Rearing. Will interest the expert and amateur. Free for the asking.—WHYTE, Bee Farm, Cumbernauld Station, Dumbartonshire. r.b.32

PENNA QUEENS.—Please note precise address: ENRICO PENNA, Casella Postale, 178, Bologna, Italy. r.c.141

GORDON ROWE, 28a, Moy Road, Cardiff, requires gross lots new 1st grade Sections.

PARCHMENT CONTAINERS, stamped "Fine Lemon Curd," offered at half price to honey producers who can affix labels over the printing. 1 lb., 4s. 9d.; ¾ lb., 4s.; ½ lb., 3s. 6d.; ¼ lb., 2s. 3d. per 100. Add for carriage 1s. 6d. to each 5s. value ordered. Terms cash.

QUEENS by return from April till October.—PEARSON & GALE, Marlborough. w.14

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A NEW BOTTLE BOX.

A cheap way of packing honey for sending
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BURTT & SON, GLOUCESTER.

THEY are mowing the Sainfoin here in the foothills. On Monday we migrate to Maure, par Seyne-les-Alpes **(4,390 feet above sea-level)** where the Sainfoin is just opening its first flowers and will be followed by sage, mountain thyme, lavender, winter savoury, alpine pasture plants and spruce honey-dew, making together a **heavy honey-flow lasting until the Autumn rains and frosts. Queens reared during a heavy, natural honey flow are Nature's best queens.** Only one other breeder on earth, (California, U.S.A.) goes to such trouble and expense in insuring choice queens for his clients: **I** deserve **your** orders; can **you** afford to order elsewhere? Only the best queens bring the big profits; and when you are satisfied, so am I: is that fair? An **American Beauty** (pure) or a Carniolan Alpine queen mated to an **American Beauty** drone—July 9/-, Aug.-Sept. 8/-. Cash with order.

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For **BEST Bees**
BEE Hives
BEE Appliances

Send to **C. T. OVERTON & SONS,**
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FAMOUS COTSWOLD QUEENS **Direct from the Breeder.**

COTSWOLD QUEENS PRODUCE VIGOROUS BEES OF SUPREME HONEY-GATHERING QUALITIES.
EVERY STAGE IN BOWEN'S SYSTEM OF QUEEN REARING IS CALCULATED TO DEVELOP JUST THOSE FINE LONG-LIVED QUEENS WHICH MAKE BEE-KEEPING PROFITABLE.

SPECIAL JULY OFFERS.

SELECTED QUEENS: ONE, 9/-; THREE, 24/-
VIRGIN QUEENS: ONE, 3/-; THREE, 7/6. | ORDER AT ONCE.

LIEUT. A. H. BOWEN, CORONATION RD., CHELTENHAM
ART BOOKLET FREE.

The Bee-Keepers' Calendar.

JULY, 1922

13 Thursday. "The wild thyme on the mountain's knees
Unrolls its purple market to the bees." *Noyes, "Summer."*

14 Friday "With the breath of thyme and bees that hum
Across the years you seem to come."
A. Dobson, "To a Greek Girl."

15 Saturday "A honey-cell's in the honeysuckle
And the honey-bee knows it well." *D. G. Rossetti, "Chimes"*

16 Sunday "But Jonathan put forth the end of the rod that was in his hand and dipped it in an honeycomb, and put his hand to his mouth; and his eyes were enlightened."
1 *Samuel*, xiv. 27.

17 Monday "Beans all a-blowing by a row
Of hives that great with honey go,
With mignonette and heaths to yield
The plundering bee his honey-field."
Katharine Tynan, "The Choice."

18 Tuesday "Its garden fragrant with roses and thyme
That blossom no longer except in rhyme,
Where the honey-bees used to feast."
L. C. Moulton, "The Strength of the Hills."

19 Wednesday "The wind in the reeds and rushes,
The bees on the bells of thyme." *Shelley, "Hymn to Pan."*

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Editorial

The Scent of Flowers.

During the past few weeks there has been much discussion in several papers on the undoubted fact that some hitherto sweetly-scented flowers have lost their scent, and also much speculation on the cause.

The most notable example of this loss of scent is the musk: violets also are said to be losing their scent, as well as roses, so that there would seem a probability of our flowers eventually losing one of their most pleasing attributes. Our florists appear to be working for size, colour and shape, and in doing this are sacrificing what is, in our opinion, the greatest charm of a flower its pleasing perfume.

One theory as to the cause of this is

that man, wishing to know exactly how his flowers are fertilised and to secure the desired effect, does not trust to insects, or other means designed by nature for the purpose, but transfers the pollen from flower to flower himself, the result being that the flower finding that it is not necessary to give off a perfume to attract insects gradually ceases to do so. If that theory is correct may we look forward to the time when many flowers will also cease to secrete nectar for the same reason, as, no doubt, that is also given to induce bees and other nectar-loving insects to visit the flowers and incidentally carry pollen from one to the other. We do not think this is likely to happen to those flowers that bees forage for their stores of honey and pollen, but the point is an interesting one.

A Dorset Yarn.

"This man with energy and thought controls,
And speaks with modest violence our souls."

This was brought home to me last week by a modest bee-keeper (who shuns the limelight) quoting Maeterlinck. How delightfully he wrote the songs of bees! This visitor seemed to know the text fully. No wonder such as these pass all the exams.: they carry the exact words of the text, and can write them as the book gives it, when others can only remember some, and that not perfect.

Pope, from his writings, knew human nature well: he knew that "energy and thought," with his high-toned phrases, would stir the hearts of man, but the delightful words of Maeterlinck's "Song of the Bee," given by a clever elocutionist, is worth going a long way to hear; but this one came to the farm. "One touch of Nature makes the whole world kin." Whatever our rank in life, if we are interested in the same book, the "book of Nature," all the world are as brothers. Many writers of books on bees were quoted, so enthusiastic was the visitor—"read this," "read that." Some old as the everlasting hills; some modern. It would take a long time to read them all, but must get "Lore of the Honey Bee"; one reads of this writer on Nature subjects in the newspapers.

"Knowledge is power," I have read many times. The man of knowledge dominates his fellows. This is seen in everyday life. How much about bees does the local adviser know? *If he knows no more than myself, what is the good of him coming to see my bees?* This was brought to me last week by one of our Association; if my eloquent visitor had gone there to see him instead he would soon have found that the works of noted bee-men could be quoted in full. This "man of energy and thought" would tell him in the full text of Maeterlinck how bees have the song of anger, of content, and grief; the battle song of two queens in combat; the songs of swarming, and robbing; the marriage song of the young queen; could quote the full text of Dzierzon the German on parthenogenesis; the best time to divide stocks; when to double them. So many writers have their own plan of action; the man of memory can give the different ways of each; yet many a bee-keeper in Dorset has never read a book on bees, but, in his own way, he has always had plenty of honey.

One told me on Saturday he had wintered 15 bar-frame stocks and one skep; he had never read a book, had never joined an Association. He did not want anyone to show him anything; he could harvest plenty of surplus. It was only by showing him how he could help others—if he joined us, he could tell others how easy it was to harvest surplus honey; this has made him think differently. He may yet be a lecturer in Dorset. But to winter all his lot without losing a stock, to capture all his swarms, make his new hives and set them all to work in their new homes, is no small thing for a railway worker. Many of these men are fluent Labour speakers. This one had a very short time at school; he has plenty of sound common sense and adaptability, but as a railway porter he cannot give his talents free scope.

Another new bee-keeper who has bought two stocks came for a loan of books to help him: he is eager to buy some, but did not want to wait their arrival. I advised him to read the simple works first; the practical Guides would give him all that was necessary to start with.

One of our lots went in for the questionable luxury of swarming on Friday afternoon, when a strong wind was blowing from the south-west. They were a long time before they clustered—had to shake them twice; it was very cold and boisterous for them to swarm. One never can tell what they will do when so crowded with bees; they had two surplus racks, but only one of them full.

They are working the bell heather this week. Great numbers are on the moorland after this and the five-cleft heath; they are also loading in a lot of pollen, just as they did last year when nectar ran short. The later flowers of white clover do not attract them so much as they do in June, but "hope springs eternal in the human breast." This will be a boon to them this month.

Ours have a lot of leeway to make up; others write to me in the same strain. Clover honey is asked for, but now that the limes are in flower they are sure to get all possible from these. I gave a swarm some partly-filled sections, and they have cleared them out in a week; they are strong, and I have no doubt they will fill them again. This one had only one brood box; those with two and three tiers of standard frames seem to be more set on storing surplus than going in for swarming.

This last week has been a bad one for bees—wet and cold, with only a short spell of sunshine. We who live near the sea have seen what wind will do—some fruit trees broken off, others twisted out of the soil. The bee-keepers who live in the valleys must congratulate themselves on their sheltered position. I am afraid many bees must have been lost with the strong winds when laden with nectar; they seem to drop down exhausted in the front of the alighting-board, and are some time before making an attempt to move again.—J. J. KETTLE.

Jottings from Huntingdonshire

We have had another week of high winds and weeping skies with the expected depletion of surplus stores within the hives. The rainfall has been ample and we shall now look forward to a rise in the barometer and great hustling among the bees. Not every one of us interested in apiculture are so complacent as the old Yorkshire beekeeper who said that a store of surplus honey is enough to take from any stock. Swarms have been a troublesome feature this week, and one fears will continue to be while the thermometer refuses to rise. It may be true that a gorged bee has difficulty in bending her abdomen; but there is no doubt that swarming bees on such fretful days as we have experienced of late can and do overcome the difficulty. If a bee is irritable she will find a way of getting her sting home whether she be full or empty. Like the rest of us, when their inner regions are well filled, bees are in good humour and not inclined to sting; let the weather, however, put their nerves on edge, and a passing anger phase may result in a little formic acid being introduced beneath your epidermis.

The Royal Show has been the centre of attraction this week, and the Honey Tent was well patronised. The organisers of the honey department deserve great praise. The pity of it is this country is only half awake to the bearing apiculture has upon the culture of fruit and flowers. It would be a graceful and useful act on the part of the Ministry of Agriculture to place at the disposal of whatever Beekeepers' Association had charge of the bee appliance and honey department at Royal Shows a tent of considerable dimensions and so enable the public to see the honey exhibits to the best advantage. At Cambridge, the county association had done valiantly, but it was obvious that a tent double the size would have enabled them to make history. Why should the expense of running such a show fall on those who run it? Why should County Bee Associations be impoverished in their gallant endeavours to keep their craft well before the public?

There was some splendid honey shown, but here again exhibits suffered for want of room. The run honey classes struck one as particularly fine. The origin of the honey shown by two exhibitors puzzled many of us. One was that which captured the first prize in the water white honey class, and the other was an exhibit of great lucidity which took a porraceous tint when held to the light. The remarks of some of the visitors were distinctly amusing, and at the same time sad. One young lady of obviously some education, remarked to her companion, "I believe they get it that colour by feeding the bees on sugar and beer," when the companion asked, "But don't they gather it from flowers?" "No," was the response, "they get wax from the flowers and make their cells and then fill them with honey dew, but if you feed them with syrup they fill the cells with that instead. I think they flavour it with something before the cells are sealed over." I could hardly believe my ears as I heard this, and I blushed for shame as the consciousness of the crass ignorance of our educationists rushed through my mind. It was impossible to stand still for many moments at a time in a crowded tent so I walked round four times and listened, and the above I regret to say is a sample of the ignorance displayed. When a true beekeeper came in the crowd one rejoiced, but quite 7 out of 10 visitors to the tent who ventured remarks showed that their knowledge of bee lore was almost nil. But here's the pity of it; so many will assume knowledge which is to anyone who knows better, pathetic. One man, wearing a steward's badge, a great horse breeder I believe, told his companions (two of them) that honey was faked to get it different colours; in the same way, he said, as poultry keepers stained their white eggs to make them brown. Dear me! what a lot we have to do before the average Englishman has the merest elementary knowledge of beekeeping.—E. F. Hemming, Steeple Gidding.

Notes from Gretna Green.

The Season.—The second week of July has gone, and we are still without swarms or surplus honey but although the weather has been remarkably cold and wet, bees have worked well at intervals and secured enough to support themselves.

Personally, I do not anticipate a good clover crop, but rather a reversal of last season's conditions, and have arranged accordingly. If the clover flow is light I am prepared to make the best of it with powerful stocks now tiered up three and four chambers high.

The medium-class colonies are not supered at all, but have been divided in two, and young queens given to build up strongly for decisive action on the moors next month. Last season's heather campaign was a failure here, and may be compensated for by more favourable conditions on this occasion, so the dual-queen colonies will be ready when the days come for flying "oure the muir among the heather."

Profiteering.—The current murmurings anent the cost of appliances are entirely justified, but our resentment must take practical form to have any effect. It must be obvious that if saddled with extortionate charges for everything required, the honey producers' business is over-capitalised, and can only show a profit in exceptional seasons.

Queens de Luxe.—My experience is that the best possible queens are those reared in full colonies under the natural supersedure impulse accompanied by the correct conditions of temperature and humidity.

When superseding an old queen the bees subordinate quantity to quality, concentrating on two or three queen cells only, and in every case rearing from the egg. Who can deny that such queens are preferable to

those reared from grafted larvæ and on the 'mass production" system?

While investigations into the life history of *Tarsonemus woodi* may have their value, I firmly believe that the pre-natal history and mating of the queen alone decide whether her colony will acquire Acarine disease in either its transient or permanent form.—J. M. Ellis.

Whispers from Wickford.

BEE JOURNAL, May 11.—Norwich Notes and Notions.—Is Drought as Bad for Honey as Wet?

I have always found that I get more honey when we have a wet summer (if not *too* wet) than I do if it is very hot, but the honey is not so dense when it is a wet summer. But last year was just the opposite. I took 95 lbs. from one stock, being the most I have ever taken from one stock—all in 5½in. shallow bars. The same stock has now got on two racks of 8 shallow bars 5½in., and one rack of 21 sections. This is not a good district for large takings of honey, but it is mostly very good honey. Some years ago Mr. Woodley told us in The Bee Journal that in his district there was always a fortnight between the field beans and the white clover, and it is then the bees will swarm, not having anything to do outside the hive. That just hits off my district.

I am glad the Rev. Hemming finds his bees have worked the hawthorn this year, but it has been no good to us about here. My wife, daughter and myself went for three walks to see if the bees were working it, but only saw one bee in all three of our walks. But the blackthorn, which was in bloom a fortnight before the hawthorn, was just full of bees. I have never seen so many bees on it before. They seemed to pay special attention to it and the damsons. I have a heavy crop of Victoria plums, Pond's seedlings, and River's early plums, but not many Magnum-bonums or Monarch nor gooseberries.

At the end of March I found one of my stocks queenless, so I bought a skep of bees off a friend, placed it on top of the queenless stock with a piece of oilcloth with a small hole in the centre between bees and skep. On May 21 a friend sent his son over from Battlesbridge to say he had found one of his stocks dead, except the queen and a few workers, and he had sent the queen to me to see if I could make use of her. I sprinkled the bees and the queen with warm syrup with a few drops of peppermint in it, and just let the queen run in from the top on to the combs, having first moved the skep to another home. The queen was received with much joy, and is now doing fine. What a change in the hum of the bees after being queenless for about six weeks, the queen in the skep never having got down on to the combs in the brood chamber of the lower hive!

We took our first swarm on May 26, a stray one. It was found on top of a small elm tree. My wife said I could not get up the tree as it was such a small one, and I have been ill so long, so I said we would do as Wesley said, "If the people will not come to church I will take the church to the people." I got the loan of a saw, cut the tree about half way through (having first got a boy to go up the tree as far as he could and tie a cord round it). Then I gently pulled the cord, my wife held the skep, and so the bees dropped in just right. With a pocket knife I cut off the small bough, and all was safe. They were a very gentle but not a large lot. I have fed them ever since, and they are doing well.

Saw drones on the wing on June 9, the first this year. Very late, is it not?

C. Reed.

Staffordshire Valleys.

The happy days of sunshine are here, and the Langot Valley is a beautiful sight to behold. Here the Lancastrian and Yorkists fought one of the battles in the Wars of the Roses, and many are the tales that are told of valour and strategy, but now the reign of peace overshadows the past, and the glories of God's providential care are to be seen in bud and tree and flower. The bees sing their song and add to their stores the glistening nectar that shines like a jewel in a monarch's crown. What wealth is lost no one can tell, through the indifference of men. Tons of honey are waiting to be gathered, and the labourers are few. Oh, that I had the tongue of a Prime Minister! I would call all the enthusiasts together, and say, "Gather your forces together for the great conquest of flowerland," and the effort would bring wealth to the worker and health to the toiler.

I had my first swarm on June 1, and what a sight! Two skeps full of bees covering 20 standard frames, and two shallow boxes for surplus, and the parent stock is crammed full on 20 combs in two brood boxes. I had four brood boxes and two shallow frame boxes on, without an excluder, hoping to prevent swarming. It has always been successful before, but the queen would not be denied, and she has perished in her great task, leaving behind four maidens to soon carry on the work—the finest queen I have ever seen or known; not the largest, but the best. Three years of strenuous work, and her last year the triumph of all. I am extracting ten standard combs of sealed honey as the first instalment.

We shall have a big surplus if ready. But, oh, the people I call upon who are not prepared! No frames, no foundation, no spare hive or box fitted ready for an emergency. One man alone lost £40 worth of honey last year because he hadn't anticipated his requirements. You cannot get your goods in a day. Manufacturers are never prepared. They make it when it is wanted, not before. Oh, for a trumpet voice! "Be ready," for when you think you have cured the swarming fever out they come. They cannot live in too small a home. Always have a few brood boxes handy, and frames fitted up

ready for the unexpected. But better make your nuclei now. Prevent swarming by taking brood and bees and filling up with drawn-out frame of comb; add to them from time to time a frame of brood, and have them strong to winter, thus you get increase, and honey, with less anxiety of losing your swarm.

Give plenty of room. If your bees are strong early give them brood boxes, and if you know how to handle them don't put a queen excluder on. She won't go above three boxes up, and you can add your surplus chambers to your heart's content; 200 to 300 lbs. of honey, on condition you put the combs over her to be filled.

NORTH STAFFORD.

Echoes from Cornwall.

Miserable cold windy weather for the past fortnight has been against bees foraging and many stocks have been living from "hand to mouth," as the saying goes.

There is an abundance of white clover about, and given a spell of fine weather a good surplus would be obtained.

On July 5 and 6 Redruth Show provided an opportunity for the bee-men of the county, and a grand display of honey, wax, etc., was staged. Competition was exceedingly keen, and the judges had a hard task in hand to award the prizes.

Around the exhibits it was good to see such men as Rev. Beecroft, Messrs. Bennett, Crews, Knight, Sweet, Stapleton, Williams, and other leading county bee keepers having interesting chats, and the general public showed its curiosity by hanging around the outskirts of the groups listening with rapt attention to the conversation. It was generally said that the honey display had never reached so high a standard in the county before, and it was a grand sight to see row after row of bottles of high-class honey, etc., including a "Trophy."

The produce had a ready sale at the close of the show, and good prices were realised.

The splendid way in which the Redruth Exhibition Society accommodated our exhibits, and gave us freedom of action, was greatly appreciated, and stimulated us to even greater efforts next year.

A. D. BENNETT.
Cornwall B.K.A. Press Secretary.

South Norfolk Notes and Queries.

I am always so interested in the notes from other districts that I venture to send you a few from a district where beekeeping on a large scale is not a feature.

This year, at the beginning of May and until mid-June, seemed to promise to be the long-looked-for record one for beekeepers. The weather was ideal, and everything blossomed profusely, honey was stored rapidly, and those of us who managed to keep our bees from swarming, were kept busy. I never took off so much surplus before mid-June as this year, but since then there has been scarcely enough food gathered for the requirements of the brood.

All the blossoms hereabouts were forward except those of the lime trees, of which there are a great number, and these at the time of writing (July 4) are not open. By the way, can anyone tell me when the limes were last of much use for surplus? My experience has been that the weather is generally unsuitable, and on at least one occasion when the weather was right (1917) the bees scarcely worked on the blooms at all.

I note in the issue of June 15 the Rev. E. F. Hemming recommends giving only part sheets of foundation in brood frames. I tried this and the result was a mass of drone brood, and this has made me careful to use full sheets ever since.

RICHARD H. AMIES.

North-East Durham Bee-Keepers' Association.

A field day and meeting of the above Association was convened and held in the grounds of the President's Lodge at Low Eighton, Low Fell, on July 1. All the arrangements were perfect, except the weather, which was dull and lowering; the sky was ominous with rain-clouds, which discharged showers intermittently, making it altogether impossible to open a hive for the purpose of demonstrating to the company of bee-keepers and others the correct methods of handling brood combs, etc.

Over a score of members assembled, and after becoming introduced to Mr. Hyde and his good lady, strolled round the well-tended gardens, which were a blaze of colour and at their best. The fruit trees also came under notice, and the bees got their meed of praise, for, mainly through their fertilising agency, the cherries, apples, and pears were laden with embryo fruit.

After an enjoyable time in the gardens tea was served indoors, which everyone appreciated. All that one desired was there in abundance, and more. That everyone was thoroughly happy was evidence from the buzz of conversation which filled the room. The listener could hear: "Yes, Langstroth equipment for me," "Standard combs for heather surplus," "Racks on three weeks since," etc. It was good to be among them.

Occasionally one caught the dread trio of letters "I.O.W.," as they floated o'er the room, and one sympathised with the speaker.

After everyone had enjoyed a splendid repast the room was vacated for clearing, and the bee-keepers hied them to another room, where the monthly meeting was held. The minutes being adopted, the secretary informed them of the affiliation of the Association with the Apis Club, and copies

of the "Bee World" were distributed. Then followed a discussion re the inclusion of South Northumberland within the field of the Association's activity. Many apiarists are desirous of becoming associated with this association, and it was felt that the title restricted them. It was therefore moved and carried that the Association be called "The Newcastle and District Bee Keepers' Association."

The secretary then intimated that Professor Peacock, Lecturer in Zoology, of Armstrong College, University of Durham, had kindly consented to deliver, in the autumn and winter some lectures to the members in the Armstrong College on "Bees" and "Sawflies." This was received with enthusiasm. Then followed a discussion on the best hives for the heather. Our host brought one of Taylor's "W.B.C." pattern hives into the room, where it was examined, and subjected to severe criticism on account of its not having a section rack completely covering the combs. This brought on a discussion as to the best methods of preparing stocks for the moors. Several methods were explained—all good—Mr. Giles having a good plan, and the writer outlined his, which he has found uniformly successful. It is the nucleus method, uniting prior to transporting to the moors.

Then followed a lively discussion on how best to transport bees to the moors. After motors had been discussed, and rejected on account of cost, it was resolved to write the N.E.R. company with a view to procuring a ventilated truck to take the members' colonies to the moors.

'Ere the meeting broke up the secretary proposed that our host, who has enthusiastically supported the infant association, both morally and financially, be elected a life member. This was carried with acclamation.

Votes of thanks and appreciation were given with unanimity by the members to Mr and Mrs. Hyde for their kindness in providing tea and allowing the use of the grounds. This closed a memorable and enjoyable day, marred only by the weather. Seven new members were enrolled.—J. Bouch (Secretary).

South Staffordshire and District Bee-Keepers' Association.

A meeting of the above Association was held on Saturday, June 24, at The Orchard, Warley Wood, Smethwick, by the kind permission of the Birmingham City Parks Committee.

The weather was very unsuitable for an outdoor gathering; rain (much needed by agriculturists) interrupted the proceedings, yet about 50 members and friends were present, including the Rev. A. P. Lacy Hulbert, Miss Hinchley, Messrs. G. Hendley, W. Hildreth, F. W. Amphlet, W. H. Camm, J. H. Cook, A. Cheshire, J. H. Williams, E. Hipkins, C. W. Dutton, W. J. Walton, hon. secretary, etc.

The proceedings were opened by a demonstration of driving bees from a full skep into an empty one by Mr. W. Hildreth, of Smethwick. The rain and the dullness of the atmosphere was very unsuitable for the operation, and, considering the bees had been brought to the orchard in a motor-car a short time before the meeting, the operation was fairly satisfactory. Mr. Hildreth made suitable remarks during the proceedings explaining the operations.

An observation hive was exhibited by Mr. Hildreth, containing a comb of bees, with queen and brood in all stages. That this was an object of interest and much information was gathered by the questions asked and answered.

Mr. Geo. Handley, of King's Heath, gave a lecture on "The Evolution of the Hive." In the course of his remarks he stated that bee-keeping was generally admitted to be the oldest craft under the sun, and probably had been practised for a hundred centuries. He also referred to the writings of the ancients on bee-culture, and particularly to those of Pliny and Virgil, and to the type of hive in use in their time. Some of the wonderful discoveries of Huber were detailed, and reference was made to his leaf hive which, by many, is regarded as the forerunner of the movable comb hive.

Particulars were given of a number of hives invented in the early part of the nineteenth century, whereby substantial quantities of honey could be obtained by the use of supers without disturbing the brood chamber or destroying the bees. With regard to the development and perfecting of the modern bar-frame hive, the lecturer said this was a gradual evolution and the work of no single person, but mentioned the names of Dr. Dzierzon (Germany), the Rev. L. L. Langstroth (America), and Mr. Woodbury (England) as having contributed more than any others to its final perfection. The lecturer concluded his address by paying a grateful tribute to the work of the great bee-men of the last half-century, with whose names all lovers of bees are quite familiar.

A discussion followed, and several interesting facts were brought to light and debated upon.

Tea was provided in the Abbey rooms, after which a visit was made to the various gardens in Lightwood Park, and the numerous species of trees and shrubs provided interest and instruction to many.

Votes of thanks were passed to Mr. Hildreth for his demonstration, Mr. Handley for his lecture, and the Birmingham City Parks Committee for permission to hold the meeting at the Park.

Several new members were added to the Association, and the hon. secretary, Mr. W. J. Walton, will be pleased to give information to inquiries as to the advantages and benefits of the Bee-Keepers' Association. His address is, The Rosary, Histon's Hill, Codsall.

(*Communicated.*)

Summer (?) Days.

Lines suggested upon reading a poem entitled "Summer Days," contained in the issue of this Journal dated July 6, 1922.

I have the hives, and apple trees,
The blossoms waiting for the bees,
And what is more, I have the breeze
Of Summer Days.

But tell me, sir, just tell me why
You speak of summer in July,
When such a term cannot apply
To Wintry Days.

My faint poetic sense is mum,
And all my bees are stricken dumb,
Deprived of all to make them hum
On Sunless Days.

So when your poets ruminate
On weather which is out of date,
Don't print such fancies quite so late
On Dismal Days.

How can one meditate for hours
Among the bees and sunlit flow'rs,
'Neath clouded skies and icy showers
On Gale-swept Days?

How may we dream of ample stores,
Or feel contented when it pours,
Awhile the driving tempest roars
For days and days?

When summer seasons lose their form,
Just give us something not so warm,
A north-east wind, a flood, and storm
To suit such days.

July 6, 1922. S. R. H.

Bee Disease.

[10666] May I point out to bee-keepers what seems to me an effective way of fighting the deadly bee disease? This is now accepted as being due to a mite which lives, breeds, and dies in the breathing passages of the bee, thus causing the sickness and death of the host. If this is correct, the remedy must be something to breathe which would be fatal to the parasite while harmless and not disagreeable to the larger insect.

Last autumn my four strong and healthy hives were repeatedly attacked by robbers from the outside, which were not free from doubt as regards their own health. They wintered well, but in April two showed the disease so badly that I closed both hives and killed the stocks. In May the disease appeared in the other two, "crawlers" in great and growing numbers being seen every day, until by the 13th I was picking up and destroying in front of one hive alone about a teacupful of affected bees every evening.

From a list of possible substances for the "breathing" trial I chose what seemed to me the most likely, and on the evening of May 13, after removing the usual cupful of invalids from the grass, I dropped on the thin quilt on top of the frames a teaspoonful of the essential oil of peppermint, then covering up as before. Next morning there was not a single crawler. The bees were working with great activity, and were ejecting drones and drone grubs. During the six days to the 19th the total number of "doubtfuls" did not exceed 40, and from the 19th until to-day (June 9) the hives have to all appearance been in perfect health.

The trouble may, of course, recur, or it may be that the cure was merely a coincidence, but the process is so simple, so cheap, and so safe that it is well worth a trial. There are various makes of the essential oil, greatly differing in price, and possibly also in efficiency, for the purpose in question. What I used was Heron (British Drug House). R. MURRAY.

Dundee.

Middlesex Bee-Keepers' Association.

[10667] May I beg the assistance of the Journal in aid of an object which I am sure will appeal not only to Bee-keepers in Middlesex but throughout the whole country.

It is proposed to hold a great fête at Enfield on September 2 in aid of the hospital, and the M.B.K.A. have been invited to assist by making a display of honey and bee-produce, bee appliances and objects of interest appertaining to the craft.

The committee appeal to bee-keepers to assist them by the gift or loan of honey and bee products, or other interesting objects. No prizes are offered, and all honey presented will be given to the hospital.

Demonstrations with live bees will be given during the day, and it is hoped to attract a great deal of attention to a much neglected craft. Particulars may be obtained from Mrs. Hodson, Harley Lodge, Private Road, Enfield, hon. sec. Enfield Branch, or myself, G. James Flashman, Buckettsland Bee Farm, Shenley, hon. sec. M.B.K.A.

Bees Killed by Nectar in Lime Tree Flowers.

[10668] *Re* 10661, p. 308.—A good many years ago, possibly twenty, the value of the lime tree as a source of nectar was discussed pretty freely in the "B.B.J." As there were no lime trees near, I planted a few *Tilia petiolaris*, with hope that I might live to reap a sample of lime honey. I have had to change my residence, and almost the first thing I did was to plant twenty lime trees—being then 62 years. "Hope," you know, springs eternal in the *human's* breast.

Now, eight or ten years ago a gentleman from Yorkshire came South to spend his holidays in *August*. Whilst coming and going to some angling water he discovered underneath a large old lime tree large numbers of dead bees. He asked me to go with him next day to examine and discuss the cause. I have noticed that on the track of

bees from the heather the same thing occurred, especially coming near the hives. *Old heavily laden bees* drop to the ground, become chilled, and die. August is pretty well advanced, and many willing workers should be on the pension list, as old age claims steadily its tale of worn-out workers whilst gathering or returning, or if caught in a shower. Now we reasoned *rightly or wrongly* that natural causes accounted for the large numbers of dead bees on the roadway underneath the lime tree overhanging it. There were other lime trees, but as they grew in grass the mortality was not noticed. We also discussed the possibility of *diseased* bees making a heroic attempt to "carry on" and perishing in their final effort, like a cankered apple tree in its struggle to maintain the species.

The dead underneath this lime tree included a wasp or two, two or three *Bombus pratorum*, and a few *Bombus terrestris*.

The path of death across the Bayuda Desert is marked by the skeletons of camels and travellers—natural, but unfortunate.

If this should assist any of your readers it is the sum maximum of my observations, except that I this spring found a very few dead bees beneath the gooseberry bushes, but at this season we do not expect many such.

Dunaskin, N.B. D.V.

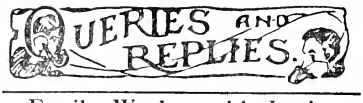
[10669] The lime tree, *Tilia petiolaris*, a large-leaved weeping lime, is well known to poison all insects which gather the nectar from its blossom. The following quotation from "The Trees of Great Britain and Ireland," by John Henry Elwes, F.R.S., and Augustine Henry, M.A., may interest your readers.

"*Tilia petiolaris* is a beautiful weeping tree which has not been nearly so generally planted as it deserves to be. There are good examples in the Botanic Gardens at Kew, Cambridge and Glasnevin. I noticed many dead bees under it in 1911. In 1908 the bodies of innumerable bees poisoned by the flowers of a tree of *T. petiolaris* at Tortworth had so much manured the ground under its outer branches that a very green ring of turf was visible in the autumn following, and was noticed by the Earl of Ducie to be even more conspicuous in 1909." H. Thiselton-Dyer, Witcombe.

Number of Queens with Swarm.

[10670] Referring to paragraph 10663, page 319, of Journal for June 29.

On June 1, one of my Ligurian stock with 23 standard frames of comb swarmed, the swarm being put into an adjoining hive. June 2. Removed 10 combs with six sealed cells to form another stock. June 15, old stock swarmed again with 2 queens. June 16, old stock swarmed again with 8 queens. June 18, old stock swarmed again with 5 queens. June 19, old stock swarmed again with 5 queens. In all four cases the queens which were strong and large, and apparently several days old, were removed, and the bees returned to parent hive. W.W.



Fertile Worker with Laying Queen?

[9941] Being a reader of The British Bee Journal, I shall feel glad if you will answer my troubles through same.

I have a stock of Italian bees, 1921 queen. Four weeks ago I took away four combs of eggs and brood, and filled up in usual way.

Now I find she has several irregular patches of drone cells on most all combs. Would the bees tolerate a fertile worker as well as the queen, as there are quite a few worker cells, but drones predominate?—J. Drayson.

Reply.—We do not think the bees would tolerate a laying worker if they have a queen. The queen is evidently failing, or possibly has been injured. Better requeen.

Bee Shows to Come.

July 19.—Wickham Bishops and District Bee-keepers' Co-operative Association, in connection with Flower Show.—Three classes open to bee-keepers resident in Essex and one class open to residents in the British Isles. Prizes up to £1 1s. Entrance fee 6d. per class.—For Schedules apply, enclosing stamp, to R. A. Pelly, Wickham Bishops, Essex. **Entries close on July 12.**

July 19 and 20.—Warwickshire Bee-keepers' Association, in connection with the Warwickshire Agricultural Society's Show at Nuneaton. Open Classes for Honey, Wax, Hives and Bee Appliances. —Schedules from Secretary, Geo. Franklin, Burton Green, Kenilworth. **Entries close July 10.**

July 20 and 21.—Lincolnshire Bee-keepers' Association Show of Honey, Wax, Hives, Appliances, etc., at Skegness. Over £30 in prizes. Open and County Classes.—Schedules and Entry Forms from Major J. H. Hadfield, Alford, Lincs. **Entries close on June 19.**

July 22.—Wyke, Normandy and District Horticultural Society's Annual Show. Honey: 5 Classes (Sections and Extracted). Open; Honey: 4 Classes (Sections and Extracted), Local; 1 Class Wax. Open. The Surrey Bee-keepers' Association offers to duplicate all first prizes in open section (Class 86 excepted).—For further particulars and Schedules apply to Hon. Sec., F. G. Kennard, Pirbright Road, Normandy.

July 22, at Mill Hill, N.W.—In connection with the Flower, Fruit and Vegetable Show, under the auspices of Hale and District Allotment Association. Classes for honey and wax exhibits for competition.—Schedules are ready, and may be obtained by sending stamped, addressed envelope to the Hon. Secretary, Mr. A. Bacon, Yewbank, Tennyson Road, Mill Hill, N.W.7. **Entries close July 15.**

July 26, 1922.—The Honey Show of the Wallop Horticultural and Floral Society have District and Open Classes for Sections and Extracted Honey.—Apply for Schedules to Mr. P. E. Roberts, School House, Nether Wallop, Hants.—**Entries close July 19.**

July 26-27, at Cardiff, Sophia Gardens.—Glamorgan Bee-keepers Association, in connection with Cardiff and County Horticultural Society's Show. Open Classes. Special prizes: Taylor's W.B.C. Hive and Apis Club Bronze Medal.—Schedules from Secretary, Chas. F. Davies, 6, Borstal Avenue, Cardiff

August Bank Holiday.—Cambridge Mammoth Show. Open Classes. Special one bottle and one section class.—Schedules from Mr. E. C. R. Holloway, Burwell, near Cambridge.

August 3, at Uttoxeter.—Staffordshire Bee-keepers' Association, in conjunction with Staffs. Agricultural Society. Seven silver, six bronze medals, are offered, including B.B.K.A., Staffs. B.K.A., Staffs. Agricultural Society, and Uttoxeter Agricultural Society. Liberal prize money.—Schedules and Entry Forms from W. Griffiths, Solway House, Queensville, Stafford. **Entries close July 15.**

Monday, August 7.—Norton Ploughing Association, Sheffield. Annual Show. Three Open classes for honey, etc. 6 jars of extracted honey (other than light), six sections of honey. Display of honey, wax, mead, etc. Schedules and all information from Wm. Bashforth, 45, Bank Street, Sheffield.

August 8 and 9, Abington Park, Northampton.—Northants. Bee-keepers' Association, in connection with the Municipal Horticultural Society's Flower Show. Open Class (entry free). Special prizes. 1 lb. jar of honey. 1st 20s., 2nd 12s. 6d., 3rd 7s. 6d.—Schedules from Mr. H. F. Swann, 41, St. Michael's Mount, Northampton. **Entries close July 31.**

August 19, at Carmarthen.—Carmarthenshire B.K.A. Show. Good Classes of Honey, Wax etc. Members' and Open Classes. Valuable prizes, including the Apis Club Silver Medal and the B.B.K.A. Silver and Bronze Medals. **Entries close August 12.** Schedules from H. Tew, Priory Street, Carmarthen.

August 19 and 21, Cannock Show.—Sixteen Classes for Honey (nine Open). Good Prizes. Schedules from Jno. Bird, Secretary, Stafford Road, Cannock, Staffs.

August 23, at Prestbury.—Gloucestershire Bee-keepers' Association, in connection with Prestbury Horticultural Show. Open class for 1-lb. jar. Prizes, 10s., 6d., 7s. 6d., 5s. (entry free). Schedules from A. H. Bowen, Coronation Road, Cheltenham. **Entries close August 16.**

August 23, at Bartley Cross.—New Forest B.K.A., in connection with the New Forest Agricultural and Horticultural Association. Open and Local Classes for Honey and Appliances.—Schedules from Mr. W. Cooper, Marley House, Netley Marsh, Southampton. **Entries close August 6.**

August 26, at Hinckley, in connection with the Hinckley Sweet Pea and Rose Society's Annual Show.—Open to all bee-keepers. First prize, 12s. 6d.; second price, 7s. 6d.; and third prize, 4s.—Schedules are ready, and may be obtained by sending stamped, addressed envelope to the Hon. Secretary, A. Kimbrell, 119, Clarendon Road, Hinckley, Leicestershire. **Entries close August 21, 1922.**

August 31, 1922.—Winchester Domestic Live Stock Association Show. Schedule of Honey Classes Open:—Class 5, one shallow frame. Class 6, six sections of 1922 honey; Class 7, six 1-lb. screw stoppered bottles of 1922 honey; Class 8, trophy of bee products to be arranged on table space 3 ft. by 3 ft.—Entry Forms to be obtained from M. W. Castle, 80, High Street, Winchester.

September 2.—Peterborough, Oundle and District Bee-keepers' Association. Show of honey. Co-operative Hall, Peterborough. Members and Open Classes. Open (entry fee 2s.), 12 bottles Extracted Light Honey, first prize, £1 10s.; second, £1; third, 10s. Gift Class (entry free). Bottle Extracted Honey to be sold for N.U.R. Orphan Fund. First prize, W.B.C. hive; second, Appliances 15s.; third, 7s. 6d.—Schedules and Entry Forms, G. H. Seamer, Hon. Sec., Waterloo Road, Peterborough. **Closing date, August 19, 1922.**

September 9.—Middlesex Bee-keepers' Association, in conjunction with the Brentford Allotments Association Annual Show, at the Wesleyan School Hall, Clifden Road, Brentford. Twelve Open Classes for Honey, Wax, etc.—Schedules and Entry Forms from R. R. Babbage, 33, Whitestile Road, Brentford, Middlesex.

September 16 to 22.—British Bee-keepers' Association Annual Show at Grocers' Exhibition, Royal Agricultural Hall, Islington, London.—Schedules from Hon. Secretary, B.B.K.A., 23, Bedford Street, Strand, London, W.C.2. **Entries close certain September 4.**

October 12, at Ongar, in connection with the Ongar and District Agricultural Association.—Extracted and Comb Honey. Open to Essex.—Schedules from G. A. Taylor, Hon. Sec., Ongar and District Bee-keepers' Association, Ashcroft, Ongar.

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One Penny per Word.

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NATURAL ITALIAN SWARMS, healthy, in new skeps, 35s. TURNER, 47, Gaisford Street, London, N.W. g.26

FOUNDATION PRESS, brood and shallow combined, new, unused, 40s., delivered. Wanted, Beeswax, any quantity. HITCHIN, Marlborough Road, Long Eaton. g.27

HIVE, for 14 frames, lift, deep roof, 12s.; also for 11 frames, lift, deep roof, 25s.; three Section Racks, with dividers, 1s. 6d. each.—Apply, MISS LOWE, Hinton S. George, Crewkerne. g.28

OVERSTOCKED.—Immediate delivery. Very strong 6-frame Stock, headed by 1922 Jan Strgar pure Carniolan Alpine Queen, 65s., carriage paid.—R. V. ROBERTS, 59, Otter Street, Derby. g.29

OVERSTOCKED.—Strong 10-frame stocks for sale, Hybrids, £3; Italians, £3 5s.; Carniolians, £3 10s.; box 10s., returnable.—ANTHONY, 54, Knavesmire Crescent, York. g.57

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SALE, two new W.B.C. Hives, unused, with super and section rack, 32s. 6d. each.—H. STRIDE, 37, Ridley Road, Winton, Bournemouth. g.32

ITALIAN STOCK, strong and healthy, new Queen, supered and in good hive, £4 10s.; bargain.—Call or write, JAMES ENTWISTLE, 39, Mount Street, Swinton, Lancs. g.33

SURPLUS.—Italian or Black Hybrids on 4 to 10 frames, with 1922 Queens, price 32s. 6d.-72s. 6d. each; also two 1922 fertile Queens, 7s. 6d. each.—WM. JACKSON (Certificated Expert), Post Office, Bleasby, Notts. g.55

BEST OFFER for six dozen good, clean drawn-out Shallow Frames.—W. FAY, Bee-keeper, Havant. g.56

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I HAVE SEVERAL NUCLEI (Hybrid) for disposal, 4-frame, 25s., carriage paid; travelling box free. These nuclei are very strong, and are splendid value for money. — RICHARDSON, Grange House, Grange Road, Gillingham, Kent. g.38

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PENNA QUEENS.—Please note precise address: ENRICO PENNA. Casella Postale, 178, Bologna, Italy. r.e.141

GORDON ROWE, 28a, Moy Road, Cardiff, requires gross lots new 1st grade Sections.

PARCHMENT CONTAINERS, stamped "Fine Lemon Curd," offered at half price to honey producers who can affix labels over the printing, 1 lb., 4s. 9d.; ¾ lb., 4s.; ½ lb., 3s. 6d.; ¼ lb., 2s. 3d. per 100. Add for carriage 1s. 6d. to each 5s. value ordered. Terms cash.

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Bridgnorth Agricultural Show, August 10, 1922.

Bridgnorth and District Bee-Keepers' Association.

J. S. LAWTON,
Secretary,
14, INNAGE ROAD, BRIGNORTH.

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Class 1—3 Jars Light Honey .. Entry Fee, 6d.	5/-	3/-	2/-
Class 2—3 Jars Dark Honey .. Entry Fee, 6d.	5/-	3/-	2/-
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Class 4—Best Trophy, not exceeding 100 lbs. .. .. (Unless there are three entries 1st prize will be withheld.) Gift Class.	20/-	10/-	7/6
Class 5—1 Jar Run Honey, any colour		7/6	2/6

All Entries to be sent to Secretary on or before August 5.

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THEY are mowing the Sainfoin here in the foothills. On Monday we migrate to Maure, par Seyne-les-Alpes **(4,390 feet above sea-level)** where the Sainfoin is just opening its first flowers and will be followed by sage, mountain thyme, lavender, winter savoury, alpine pasture plants and spruce honey-dew, making together a **heavy honey-flow lasting until the Autumn rains and frosts. Queens reared during a heavy, natural honey flow are Nature's best queens.** Only one other breeder on earth, (California, U.S.A.) goes to such trouble and expense in insuring choice queens for his clients: **I** deserve **your** orders; can **you** afford to order elsewhere? Only the best queens bring the big profits; and when you are satisfied, so am I: s that fair? An **American Beauty** (pure) or a Carniolan Alpine queen mated io an **American Beauty** drone—July 9/-, Aug.-Sept. 8/-. Cash with order.

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The Bee-Keepers' Calendar.

JULY, 1922

20 Thursday. "The honeysuckle is sucked of honey,
And the bee is heavy and bonny." *D. G. Rossetti,* "*Chimes.*"

21 Friday. . . . . . "Every sense
Filling with spiritual sweets to plenitude,
As bees gorge full their cells." *J. Keats,* "*Endymion.*"

22 Saturday. "And as the whispering breezes bend the tall reeds to and fro
You hear a sweet and pleasant sound like music soft and low;
It mingles with the drowsy hum of bees among the corn,
And you can listen to this song all through the summer morn."
R. Richardson.

23 Sunday. "The young
Fly homeward late and weary, heavy breeched
With thyme; on arbutus beside they feed,
Grey willow, ruddy crocus, cassia,
And sumptuous lime and amber hyacinth."
Virgil, "*Georgics,*" *Book* IV.

24 Monday.
"Yet for all that, the bee flies for honey-dew fragrant
To the half-opened flower of her lips,
And the butterfly pauses, the purple-eyed vagrant,
To play with her pink finger-tips."
A. P. Graves, "*Nancy, the Pride of the West.*"

25 Tuesday. "I was rich in flowers and trees,
Humming-birds and honey-bees."
J. G. Whittier, "*The Barefoot Boy.*"

26 Wednesday. "Have you seen but a bright lily grow,
. . . . . .
Or have smelt of the bud of the brier?
Or the nard in the fire?
Or have tasted the bag of the bee?" *B. Jonson.*

Prices.

We have published several letters referring to the price of appliances during the past few weeks, all our correspondents taking the view that prices are too high. We have only received one letter for publication from those who make and sell appliances. This is from Mr. Meadows, and will be found on another page. There are two sides to every question, and as we have no axe to grind we shall be pleased to publish anything the appliance dealers have to say. Mr. Meadows does not give any figures. We think it would have been better had he done so. In conversation with one manufacturer, he told us that sections he had paid 45s. for he had to sell for 35s., a proceeding that is more likely to lead to the Bankruptcy Court than to fortune.

A Dorset Yarn.

" 'Tis hard to say, if greater want of skill
Appears in writing or in judging ill."

One makes certain deductions as the many years go by; when weather is too dry surplus honey is short, when too wet stores are also short; but since these rains our bees have drawn out standard bars of comb at a great rate. On the 10th a box of nine standard combs placed on the top of nearly-filled sections were all partly filled on the 15th, and this a stormy week. We gave them one comb with some honey in the cells from another stock to start them; we find that they will not fill sections as they will standard combs, as they seem to like working on the brood base better than the thin super foundation. It is either "greater want of skill" or my judgment is at fault. When nectar is scarce they would rather store the little they gather in among the larvæ in the brood nest than begin sections, though the hive is full of bees.

I have no wish to write that others should be at fault, so narrate what happens during the days at the farm. The sections have nice tasting honey, but as so many are not finished I have placed them on the top of very strong stocks, but they would sooner empty than complete them, but new thick base foundation in standard bars they at once begin to draw it out. In some of them a few pieces of shallow base were used in the standards, and the second day they were lengthening them. Is it the greater freedom or sweeter base to draw out? Have filled up two more boxes of standards to go on if it is warm to-day when I get back from church; stocks are so strong I am afraid the section lots will swarm; we had one from stock with three brood boxes on Saturday. It was only a swarm this season, from a neighbour who had not another empty hive to put them in, and they have done one rack of 2-lb. sections, filled two boxes with brood, and one with honey.

They selected a tall apple tree for their first rest, and I had to have a ladder to get them.

We have one lot which has been given three combs at different times to raise a queen for themselves, but finding a comb with several fine long queen cells on Thursday, when Mr. Garret, our local secretary, came over, we gave this to the queenless lot. Mr Lund, of the Bucks. Association, who was here Wednesday, advised me to run in a swarm with them, but I thought they ought to raise up a queen for themselves. They are a mixed lot now, for one comb was from the yellow lot, and others from hybrids. The lot that wintered through was black. Here again the text comes in:

" 'Tis hard to say if greater want of skill,
Appears in writing or in judging ill."

I certainly did not judge the combs to their liking, or they would have raised a queen. The others which I thought were queenless have now whole combs of brood.

While the visitor from the Bucks. Association was at the farm two swarms came out, but each left the skep after he had shook them and went back into the hives. It was fortunate for me he was there; he waited all day to see me, and watched them go back. (Was at Dorchester till evening.) He thought that the stocks had requeened and she was out for mating.

A representative from the Ministry of Agriculture came on Tuesday in the person of our National Secretary. Mr. Simms, of the National Council, also paid a visit to the farm. We have, beside the bee enthusiasts, many fruit growers who stay in Bournemouth; these are interested in bees but did not keep them.

Our bees seem to be on the blackberries pretty much this week and on the new flowers of rasps as the women and children gather the fruit. Some of them are afraid of so many bees together. The rain has doubled the crop this year. These are selling well, and I shall have to extend them in another field. It will all make more food for the bees.

Schaffer's black raspberry from America has now its ripe fruit, but the Japanese rasp is only now in flower. The Hailsham and other late fruiting rasps all look well for the flowers, and there is no doubt about this family being a good one for bees. They produce so many flowers and carry on such a long time.

Mignonette has bees continuously, but stocks get but few. Runner beans have a fair show of them; some of my friends think that when bees work this crop heavily the honey season is over; still, we on the fringe of heather, will do well with the ling when it is fully out; it is showing the light flowers now.—J. J. KETTLE.

Jottings from Huntingdonshire

Three days of bright sunshine gave the bees a fine opportunity to replenish the stores so greatly depleted during the previous ten days, also the sudden warmth brought swarms. I had four swarms and one cast in one afternoon (the 10th). Two of these swarms, with the cast, I ran into one hive of ten frames, and supered straightway. Moreover, I placed this hive in a field rich in white clover. I had previously walked over that field and saw not more than half a dozen bees working the bloom, the reason being the field is north of my apiary, and again I repeat bees will not fly north if they can find some pabulum in a southerly direction, and what is more they will fly a mile southwards for nectar when they might get all they needed 400 yards north. Of course, I am not assuming that were there no nectar southwards of the hives and plenty northwards the bees would waste time exploring the southern wastes when the north offered them all they needed. It may be they prefer to go towards the sun. However, putting the hive in the field with a whole stretch of white clover before their front door, so to speak, had the desired result, for on the next day I was

almost afraid to walk through the field for fear of stepping on bees.

What is Royal Jelly? Mr. C. S. Fergusson in the June "Bee World"—an exceptionally brilliant number, by the way—raises the question in an intensely interesting article. That it is a secretion all will admit, and agree that it has an acidity not found in ordinary bee bread; and I think that most of us will consent that this jelly is fed in certain proportions to all grubs. Furthermore, observant bee-keepers will not quarrel with the conclusion that superabundance of royal jelly in a hive is the primary cause of swarming. Not one of us will, I take it, do other than concur when I say that it is the secretion of this substance which directly causes swarming fever. Should there, however, be any readers who are unable to consent to this opinion, I hope they will thoroughly discuss the matter in the columns of this journal. As to whether or no the queen's attendants start the swarming trouble is a point not yet decided. Personally, I believe, as readers will be aware, the "bosses" in this direction are the drones. They, however, are no doubt raised to the exciting pitch owing to an excessive amount of what the dictionaries call "a regal decoction." A queen bee's attendants are not picked up haphazard, nor does her majesty keep the same retinue always about her person. From observations one learns that she changes her bodyguard daily, but different races of bees adopt different methods. Dutch bees appear to demand that most members of the colony should take turns in waiting upon the queen. This may be because these creatures secrete more royal jelly than other races. Italian bees are not so punctilious. In these colonies marked attendants can be seen in the wax festoons the following day, and later doing duty at the city portals, but never, so far as I have been able to trace, go foraging. Carniolan queens will keep their attendants for two or three days at a time, and even when the retinue is changed some of the marked ones will be seen performing their guard of honour as if some of the experienced courtiers were retained to put the novices through their paces. Hybrid bees are disconcerted when the hive is opened, and the royal guards seem nonplussed often as to what they should do. At times they rush around her as if to enclose her in; at others they just fall back among the crowd and follow her majesty as if fearful of being tried and beheaded. This, like all else in apiculture, is both interesting and fascinating. My observatory hive is not the best in the world, but it is wonderful what can be learnt by observation. Bees are such dears. One time they make you hold your breath they are so solemn, another they will compel laughter, their antics are seemingly so funny. Of one thing there can be no two opinions. Observation increases knowledge, and yet there are people who say, "What is there in a beehive to excite emotion?"

Steeple Gidding. E. F. Hemming.

Week-End Bee-Keeping.

By S. H. Smith.

(Continued from page 328.)

My little effort had fallen flat. At other times and places I might have been conscious of a latent irritability coming to the surface. Even in our best bee-keeping circles this failing will manifest itself when endeavours are thwarted. But in that charmed garden no such reaction was possible.

Nevertheless, I seized the rabbit foot, dangling at the end of a piece of string attached to the blackboard, and was about to wipe out the equations, when gentle but firm touches on my wrist stopped me. The twins, smiling appealingly, were asking to be allowed to copy the figures. They marched off with the blackboard.

"I was reading the other day," said D. B., "of some Johnnie who claimed he could make even Einstein intelligible if allowed sufficient paper and ink, and without using mathematical formulæ. How many miles of blackboard and how much chalk would you need Week-End to explain the mysteries of the beehive? Or were you leading up to Einstein?"

I explained that I had "lifted" the chemical part from recent writings by Dr. Steinmetz, because I thought it might interest the D. B. family. Steinmetz denies the existence of the ether, Einstein ignores it. And the latter attitude needs more explanations than the former.

D. B. groaned. "The damage is done, dear boy, whichever is responsible. Your formulæ have made a hit with the twins, and that means poor father will have to get old Steinmetz's book to be able to answer innumerable questions. What a lot of trouble you irresponsible old bachelors let loose in the world! I perefer the direct 'machine-gun' methods you use in your apiary. Now you've come to earth again maybe you will tell us what is in that bundle. From the sounds that issue when it is handled, I should say the wrapper conceals a boiler-clad suit. Is it something new in bee wear?"

I cut the string and exposed an enamel bucket, a ditto wash-basin, and a ditto soap-dish. Two hand towels when extracted from the bucket, unrolled, and a cake of soap fell out. Unwrapping an "out-size" pyjama suit, a pair of old boots were in evidence.

"You need not laugh. I never did any so-called 'experting,' but I visited many discouraged and despondent bee-keepers when carrying around a spraver and a bottle of Flavine in 1917-18. What percentage of them ever offered me a chance to wash up after operating on their messy hives? I refuse to tell you. But after that experience I resolved to take no more chances."

"Now my deal with D. B. called for eight separate visits to this apiary. How was I to know that you had hot and cold laid on right inside the front door? Even at that I might have to bring muddy shoes into the hall some day if I were not provided with a change."

When they were through laughing, Mrs. D. B. kindly intimated that some girl had missed it by not taking pity on me in my youth. But D. B. maintained that she had had a lucky escape.

Came Freda bringing refreshments, and we toasted the two bee stocks in goblets of a delicious sherry. According to D. B., this Manzanilla could be imbibed at any time and in any quantity. I believed him, and regretted there were only two bee stocks.

The twins came along and asked for a story. D. B. stretched himself in a steamer chair, folded his swollen hands over his waistcoat, and snoozed audibly. Mrs. D. B. sat sewing quietly, and I unfolded the story of the bees to the children. It is an old, old story, and better told in a hundred books than I could give it; but it was worth while telling it in my own way to my audience. There is nothing quite like winning those flashes that pass back and forth from the inquiring and the instilling mind when teacher and pupils are interested in a subject.

But at the finish the twins rebelled. "Why! oh, why! do you end the story that way?" All our books have nice endings; everything and everybody lives happily ever afterwards."

"Why do all the father bees have to die?" asked Daphne.

"The race-preservation motif in connection with insects presents many peculiar problems. Possibly the egg cell is only activated——"

"The price of duck eggs was only 7d. per dozen on the Market Hill yesterday," hurriedly broke in Mrs. D. B.

"Mummer, dear, why is Mr. Week-End rolling his eyes?" asked Beryll.

D. B. woke up. "Boiler-clad suits all around and cottonwool ear muffs! What! Is Week-End still at it? And those children still up? To bed, kiddies, to bed at once! Ah! here comes Freda. Take them away and tuck them in, Freda, as quickly as you please."

The sun had gone down some time ago, and I rose to leave. And at last the inspiration came.

"Wait, Week-End," said D. B., "wait till I go to the house and write out that cheque. And what's the programme for next week?"

"I'll have to come here about noon to cut out queen cells and to inspect the bottom brood chambers. If everything is O.K. we will meet at my apiary at 3 p.m., and make ready some bee stocks for transport to waiting customers. If there is time, we can avail ourselves of invitations to visit some large apiaries. But maybe we had better devote a whole day to that the following week."

"Before we do anything D. B., I'd like to make a proposition. We are only here now and then, and the onus of many things will fall upon Mrs. D. B., not to mention the trials and tribulations she has already so patiently endured. Supposing we offer her a third interest in our little enterprise?"

"I have spoken of those bees as 'paying guests.' Bees appeal in many other ways than purely utilitarian ones. By their very naturalness and independence of us they deserve a higher status. Ever since I entered this garden I have felt the charm. Your trees and shrubs and flowers are treated as friends. Let the bees claim the same privilege, and none of us will regret it."

(*To be continued.*)

Royal Show at Cambridge.

The Hives and Honey section was arranged by the Cambridge and District Bee-keepers' Association, and the exhibits attracted a considerable number of people. Messrs. E. H. Taylor, Ltd., Robert Lee, Burtt & Son, Dickinson & Owen, and Seamark had staged a goodly display of hives and appliances, the latter showing some excellent examples of his straw skeps. In the novel appliance class Mr. Robert Lee was awarded first prize for Adminson metal combs; Messrs. Burtt & Son carried the second prize for a fine packing case for bottles (one of which they packed and sent with honey from Gloucester and which arrived at the Show quite in order); the third prize was awarded to Messrs. E. H. Taylor for a four-way bee escape. A reinforced "dummy" was entered by Mr. Thomas and a new feeding and inspection quilt by Mr. Birkett.

Over 160 entries were received, but a number of these were not staged owing to the bad weather prevailing during the few weeks preceding the show. Demonstrations with live bees were given by Mr. Allen Sharp and other members of the C. & D.B.A., but the full programme could not be carried out owing to the very rough weather experienced during the week. The awards list is appended.

Judges: Rev. Tickner Edwards, F.E.S.
John Anderson, Esq., M.A., B.Sc.

Class 1 (2 entries).—Collection of Hives and Appliances suitable as an outfit of essential articles for a beginner in bee-keeping:—Silver medal, E. H. Taylor, Ltd., Welwyn; bronze medal, Robert Lee, Uxbridge.

Class 2 (2 entries).—Most complete and inexpensive Frame Hive for Cottager's use, unpainted:—Silver medal, E. H. Taylor, Ltd., Welwyn; bronze medal, Robert Lee, Uxbridge.

Class 3 (25 entries).—Twelve 1-lb. Sections of Comb Honey—hive, 30s., 20s., 10s., 7s. 6d., 5s. (hive given by Messrs. E. H. Taylor, Ltd.):—1st, W. Hall, Fulbourn; 2nd, A. W. Pepper, Melbourn; 3rd, S. Sanderson, West Wratting; 4th, W. S. Halford, West Wratting; 5th, L. Dix, Saffron Walden; 6th, C. W. Dyer, Compton Crossing.

Class 4 (14 entries).—Twelve 1-lb. Jars of Extracted Water-white Honey—hive, 30s., 20s., 10s., 7s. 6d., 5s. (hive given by Mr. Robert Lee):—1st Wells & Co., Isleham; 2nd, R. W. Lloyd, Thetford; 3rd, W. Mosley, Whittlesford; 4th, J. E. Rogers, Cambridge; 5th, Mrs. Gordon, Whittlesford; 6th, John Barnes, Burwell.

Class 5 (32 entries).—Twelve 1-lb. Jars of Extracted Light Amber Honey—hive, 30s., 20s., 10s., 7s. 6d., 5s. (hive given by Messrs. Steele & Brodie):—1st, Griffiths & Awbrey, Llanelly; 2nd, G. Thomas, Exning, Suffolk; 3rd, C. H. Adams, Newmarket; 4th, W. Freeman, Saffron Walden; 5th, F. W. Bunting, Exning, Suffolk; 6th, F. Humphrys, Comberton.

Class 6 (15 entries).—Twelve 1-lb. Jars of Extracted Medium Honey—30s., 20s., 10s., 7s. 6d., h.c., c.:—1st, E. C. R. White, Salisbury; 2nd, Wm. Hall, Fulbourn; 3rd, Griffiths & Awbrey, Llanelly; 4th, A. E. Warren, Bletchley; h.c., F. Humphrys, Comberton; c., Miss Heale, Barming, near Maidstone.

Class 7 (7 entries).—Twelve 1-lb. Jars of

Extracted Dark Honey—20s., 12s. 6d., 7s. 6d. :—1st, Miss Heale, Barming, near Maidstone; 2nd, E. C. R. White, Salisbury; 3rd, A. Barber, Comberton.

Class 8 (14 entries).—Twelve 1-lb. Jars of Extracted Granulated Honey—hive, 20s., 10s., 5s. (hive given by Messrs. E. J. Burtt & Son) :—1st, W. S. Halford, West Wratting; 2nd, S. Sanderson, West Wratting; 3rd, J. E. Rogers, Cambridge; 4th, W. Mosley, Whittlesford.

Class 9 (19 entries).—Two Best Shallow Frames of Honey for Extracting—20s., 12s. 6d., 7s. 6d., 5s. :—1st, S. Sanderson, West Wratting; 2nd, W. S. Halford, West Wratting; 3rd, W. Mosley, Whittlesford; 4th, W. Freeman, Saffron Walden.

Class 10 (4 entries).—Best and most attractive Display of Honey in any form, staged on space 4 ft. by 4 ft.; maximum height not to exceed 4 ft. above table—60s., 30s., 20s., 10s. :—1st, J. E. Rogers, Cambridge; 2nd, W. S. Halford, West Wratting; 3rd, W. Mosley, Whittlesford; 4th, G. Thomas, Exning, Suffolk.

Class 11 (12 entries).—Two Cakes of Beeswax, each approximately 1 lb. in weight—20s., 10s., 7s. 6d., 5s. :—1st, E. C. R. White, Salisbury; 2nd, C. H. Adams, Newmarket; 3rd, P. J. North, Cambridge; 4th, G. Thomas, Exning, Suffolk.

Class 12 (8 entries).—Beeswax in marketable form, suitable for retail trade, in cakes of 1 oz., 2 oz., and 4 oz.; not less than 3 lbs. in the aggregate; not less than 1 lb. of each size must be shown—20s., 10s., 7s. 6d., 5s. :—1st, G. Thomas, Exning, Suffolk; 2nd E. C. R. White, Salisbury; 3rd, C. H. Adams, Newmarket; 4th, J. L. Davey, Spalding.

Class 13 (4 entries).—Cake (approximately 1 lb. in weight) and Collection of Small Cakes (approximately 1 lb. in weight) sweetened solely with Honey)—20s., 12s. 6d., 7s. 6d. :—1st, Miss McRae, Whittlesford; 2nd, S. Sanderson, West Wratting; 3rd, J. E. Rogers, Cambridge.

Class 14 (5 entries).—Most novel and interesting Appliance in connection with bee-keeping to which no prize has been awarded at a Royal Show—20s., 12s. 6d., 7s. 6d. :—1st, Robert Lee, Uxbridge, aluminium semi-comb; 2nd, Burtt & Son, Gloucester, corrugated box for feeding honey; 3rd, E. H. Taylor, Ltd., Welwyn, four-way bee escape.

Class 15 (1 entry).—A Design or Trophy in Beeswax. Half possible points will be given for the design or general "get up," and half for quality of wax. Weight not less than 20 lbs. :—Silver medal, G. Thomas, Exning, Suffolk.

MEETING OF BEE-KEEPERS.

In response to a general invitation from the Cambridge and District Bee-keepers' Association to all bee-keepers visiting the "Royal," about 50 or 60 members of the craft assembled in the members' tent on the show ground on Thursday, July 6, amongst those present being Sir Douglas Newton, M.P., Lady Newton, Revs. Tickner Edwards, E. F. Hemming, Messrs. J. Anderson, Clay, Rogers, Ford, Mapey, Thomas, W. Herrod-Hempsall, Holloway (Hon. Sec.), and many others.

Mr. Clay, who occupied the chair until the arrival of Sir Douglas Newton, said that there were a number of enthusiastic bee-keepers in Cambs, who felt that it was up to them to see that they were represented at the Royal Show. They were not a rich Association by any means; if they had had a better fortnight immediately before the Show they would have been able to provide a better exhibition.

Speaking on the subject of the marking of imported honey, Mr. Anderson said that the Government should take steps to see that all honey from abroad was clearly labelled; they did not wish to ask the authorities to mark all honey with the name of the country it came from, but at the same time it should be clearly distinguished from the English product. There was no objection to foreign honey as such; the objection was that foreign honey was purchased at 3d. and 5d. and sold to the public at 1s. 6d. as British honey. Mr. Mapey, Mr. Rogers, Mr. Thomas and the Rev. E. F. Hemming took part in the discussion.

Sir Douglas Newton then put the resolution: "That this meeting of bee-keepers, convened by the Cambridge and District Bee-keepers' Association at the Royal Agricultural Show, desires to urge upon the Government the need of all imported honey being so marked," and it was carried without dissent. The resolution to be sent to the Board of Trade and the Ministry of Agriculture.

Some discussion took place in connection with the wintering of bees and experiences of the use of metal combs.

E. C. R. Holloway,
Hon. Sec., Cambs. B.K.A.

Medway and Kent County Bee-Keepers' Association.

This Association has probably established a record for rapidity of development, resourcefulness and vitality that will be hard to beat.

Two months ago a small band of enthusiastic bee-keepers met and decided that, in view of the increasing interest in the craft, the time was ripe for founding a new Association with a live educational and social policy. That the venture was justified is proved by the rapid increase in membership and the large numbers of people who have flocked to hear the lectures and demonstrations provided.

A preliminary meeting, when 103 people were present, was held on April 29, and Mr. Herrod-Hempsall gave a lantern lecture in Rochester Guildhall. His reputation as an expert drew a large audience to hear a most interesting lecture on "Bee-keeping for Pleasure and Profit." At the meeting it was decided that the proposed Association be founded, and members were enrolled. Subsequently a strong committee was formed under the able presidency of Captain Leach, with Mr. G. Bryden as hon. secretary and Mr. A. R. Castle as assistant secretary. These men have the advantage of being well known locally, and Mr. Bryden especially has been the guide, adviser and friend of every novice in the neighbourhood, and in even a wider area than that. If it be true, and I for one do not doubt it, that "the Society is the secretary," the new

Association is assured of being considered in the near future as one of the most active and useful in the country.

Already there have appeared in these columns accounts of two very successful lectures and demonstrations held under their auspices, and on Saturday, June 24, they tried to go one better by arranging, in the beautiful grounds of Preston Hall, an ambitious series of lectures and manipulation of bees.

Preston Hall, with its magnificent grounds and park, was once the home of distinguished families, and has now been acquired as a training school for disabled soldiers and sailors. Amongst the various occupations for which the men are trained, bee-keeping is taught, and Mr. Bryden acts as the instructor. Twelve months ago he commenced operations with six stocks, but with his accustomed thoroughness he has enlarged to nearly 100 stocks, well placed in four apiaries in different parts of the grounds, one being set apart for the production of extracted honey, one for comb honey, one for increase and queen rearing, and one is used as an experimental apiary.

The work of the day began in pleasant weather, after Mr. Moreby, in a few well-chosen words, had welcomed the assembled guests in the name of the medical superintendent. The first lecture was given by Mr. J. Herrod-Hempsall in the North Gate Apiary.

His subject was "Producing and Preparing," and it received a thorough treatment. Valuable hints were given on how to prepare the products of the bees, either for show or advantageous sale. What a sound judge and what a dangerous opponent the lecturer would make at a honey show! As most bee-men are aware, the brothers Herrod-Hempsall learnt in the school of experience, and much of what they know will be found in Mr. W. Herrod-Hempsall's "Producing and Preparing," a book that is indispensable to every bee-keeper.

After questions had been invited, put, and answered, a move was made by the ever-increasing throng (about 350 people were present altogether) to the Eastgate Apiary, where Mr. F. W. Watts, of East Dulwich, gave an excellent lecture on "Preparing Bees for Surplus."

Mr. Watts said: After the honey flow is over, each hive should be gone through, bad queens discarded, and new queens introduced. Notes should be made of the stores and the quantity of bees. Slow feeding should begin to ensure the raising of a sufficient number of young bees, for on the presence of a good number of these successful wintering depends. Old bees will not survive the winter, but young ones will, and be the nurses of the spring brood. One should see, therefore, that the queen has sufficient empty combs at this period for egg laying, and later on that there should be ample stores to carry them through the winter. A certain amount of re-queening is necessary to introduce fresh blood into the apiary.

The lecturer explained the importance of spring feeding and how it should be done, and the value of supplying new combs, which induced the queen to lay down full combs of brood.

Preparing bees for surplus is not a matter of a few days' work. The foundation is laid the previous autumn, the work carried on in spring, and summer should see the reward of the preparatory careful work.

Tea was then enjoyed, after which the company divided into several parties, those who felt they had heard and seen enough of bees for one day being escorted by officials round other parts of the estate—some to the poultry farm, others to the gardens and greenhouses, and others to see the beautiful grounds. Bee-keepers in the main, however, adjourned to the South Gate Apiary, where Miss Sillar, expert for H. Anderson, Esq., Buxted, Sussex, gave a demonstration of direct driving of bees from a skep into a frame hive. When the queen and sufficient bees to form a stock had gone into the new hive, a virgin queen was directly introduced into the skep, which was placed on a new stand to commence a fresh existence under a new queen. As only young bees remained in the skep, together with brood and stores, the queen would be readily accepted.

The last lecture of the day was given by Mr. W. Herrod-Hempsall in the laboratory, where Mr. Bryden had erected a trophy of honey, and where all appliances used in bee-keeping could be seen. The subject of the lecture was "Preparation for Wintering." The lecturer emphasised the fact that now was the time to lay out plans and to commence this operation in preparation for next season's crop. The main points of which were the selection and breeding of young vigorous queens, stimulating to obtain a large colony of bees for wintering, ample well-sealed stores, and dry homes.

Votes of thanks were accorded to the lecturers on the proposition of Captain Leach, seconded by Mr. Sills. In thanking, in the name of the Council, the medical superintendent for allowing the use of the ground, Mr. Bryden spoke with gratitude of those who had come from a distance in support of the new Association, which, though only two months old, already numbers nearly 100 members. The Rev. A. Newman, a veteran bee-keeper from Ashford, spoke of the treat he had received that day. He said he was a strong supporter of Mr. Bryden, whom he had known for many years, and of the new Association.

A most interesting and successful day was thus brought to a conclusion. Everything had favoured the enterprise, the good wishes from those who came from near and far, the compliment paid our Association by the readiness with which distinguished experts came from a distance to lecture and demonstrate, the thoughtful foresight of the staff of Preston Hall, who made all preparations for our comfort, and the beautiful surroundings in which we found ourselves. Last, but not by any means the least, the weather

was propitious. Rain was so badly needed in this neighbourhood, not only for the crops, but for the bloom which we hope will culminate in a record honey flow that many of us would not have minded if it had come down during the proceedings. The heavens smiled upon us, as though aware that we were yet, albeit vigorous, a young plant deserving of encouragement and protection the rain held off till the last word was spoken, good-byes said, and we were safely embarked in motor-'bus and train, then, and not till then, came a refreshing downpour, holding promise of a harvest after seedtime, and a bountiful flow of that prince of foods—English honey.

J. B.

Barnsley & District Bee-Keepers.

In order to see if it is possible to form an Association of the above, will all those who are interested please communicate with the writer?

A stamped addressed envelope will oblige.

R. HILTON.

72, Gawber Road, Barnsley.

Summer "Daze."

With "S R H" I quite agree,
That all the wonders of the bee
Would never draw me forth to sit
Beside a hive and study it,
While rain came pouring down in floods
And chill airs nipped the growing buds
And winds from every quarter blew
As witness 1922!

In "Summer Days" I strove to show
The summers that we used to know,
But in the stress my fancy's flight
Perchance had borne me out of sight.
Here "S. R. H." with dext'rous twist
Has brought me down—a pessimist!
Abjuring weather and its ways
While suffering from Summer "Daze"!

July 13. ELIZABETH S. FLEMMING.

Questions, &c., for Bee-Keepers for Self-Examination.

(*Students are recommended to write their answers, and check them afterwards by reference to books.*)

657. Amplify, as for the information of a beginner, the statement, "Bees do nothing invariably."

658. Explain fully how and when to "spring clean" a hive of bees.

659. Show that it is incorrect to state that wax scales are removed from the wax plates of a bee by means of the "shears" on the hind legs.

660. Define rack, lift, dummy, crate, fence, division board, separator, eke, super.

661. Comment on the hiving of swarms on (*a*) full sheets, and (*b*) strips, of foundation.

662. Describe minutely and completely an egg newly laid by a queen bee.

J. L. B

A Brief Report.

July half gone and no swarms or sign of swarming, even from Dutch or Carniolan stocks overflowing with bees! Truly a unique season. Colonies abnormally strong, one single queen stock being on sixty standard combs, in addition to original brood chamber of twelve large frames. Sections filling very slowly, and supers given in June not ready for removal yet.

Gretna, July 17. J. M. E.

Adventure with 25,000 Bees.

Mr. P. E. Brown, of the Post Office, Wymeswold, Loughborough, has had the unusual experience of a swarm of his own bees, 20,000 to 25,000 strong, settling on him, and he walking thus laden to a hive to which he successfully transferred them. He was looking at his bees when he found his largest hive at the point of swarming. Relating his experience, he said: "I stood for about ten minutes wondering where they would settle, when, to my surprise, they came to me, and within another five minutes I was covered from the crown of my cap to my knees, the bulk of the bees being on my back and shoulders. I caught the queen and walked to a hive I had previously prepared. I took two good handfuls of bees from my hips and put them at the entrance of the hive with 'her ladyship' the queen. Then I gave several jumps and shook the bulk of the bees off me, and they were not long in finding where the queen was. Not for half an hour did I rid myself of bees. Throughout the whole operation I never received a single sting."—From the *Huddersfield Examiner*.

A. P. (Rugby).—*Hive full of drones.*—The queen is a drone breeder. Judging from what you say, the bees probably swarmed this year and the young queen has failed to mate. It is doubtful if the colony could be re-queened unless they can be given a couple of combs of brood on the point of emerging a few days before introducing a new queen.

W. D. (Walberswick).—*Moving bees to heather.*—One mile is a somewhat short distance to move bees, but the weather is so uncertain at the time heather is blooming that it would probably be worth while doing so. Put a handful of dry grass or similar obstruction loosely in front of entrance for the bees to scramble through for a day or two, so that they will locate the new position when they are moved.

J. D. C. (Hunts). *Bees becoming a nuisance.*—The first thing to do is to insure against liability to third parties for damages caused by bees. Erect a screen a few yards in front of the hives—in your case on the edge of the dyke, about four yards distant and seven or eight feet high. This will cause the bees to fly high over the heads of any persons working in the field. If

the bees are flying in the direction of the wheat stack when it is being built or threshed it is quite possible the men working on it may be stung, and we do not see what measures you can adopt to prevent it, beyond trying to persuade the owner to build the stack as far as possible from the bees.

J. D. L. (Devon).—*Queen not laying.*—We cannot give any reason for this. The bees have certainly accepted her. Possibly it may be due to the cold weather and scarcity of food. Try stimulative feeding. The queen may have been injured in the post.

E. W. (Wantage).—*Abnormal swarming.*—It is advisable to re-queen, as your bees are evidently a strain given to swarming. The sooner it is done now the better. You will find instruction how to introduce queens on page 135 of "The British Bee-keepers' Guide Book," which we can send for 2s. 9d., post free.

Bee Shows to Come.

A nominal charge of 2s. 6d. is made for notices (not exceeding 7 lines) in this column, 10 lines charged 3s. 6d. up to 15 lines 6s., which covers cost of insertion from order till date of show. Cash should accompany orders for insertion.

July 20 and 21.—Lincolnshire Bee-keepers Association Show of Honey, Wax, Hives, Appliances, etc., at Skegness. Over £30 in prizes. Open and County Classes.—Schedules and Entry Forms from Major J. H. Hadfield, Alford, Lincs. **Entries closed.**

July 22.—Wyke, Normandy and District Horticultural Society's Annual Show. Honey: 5 Classes (Sections and Extracted), Open; Honey: 4 Classes (Sections and Extracted), Local; 1 Class Wax. Open. The Surrey Bee-keepers' Association offers to duplicate all first prizes in open section (Class 86 excepted).—For further particulars and Schedules apply to Hon. Sec., F. G. Kennard, Pirbright Road, Normandy.

July 22, at Mill Hill, N.W.—In connection with the Flower, Fruit and Vegetable Show, under the auspices of Hale and District Allotment Association. Classes for honey and wax exhibits for competition.—Schedules are ready, and may be obtained by sending stamped, addressed envelope to the Hon. Secretary, Mr. A. Bacon, Yew bank, Tennyson Road, Mill Hill, N.W.7. **Entries closed.**

July 26, 1922.—The Honey Show of the Wallop Horticultural and Floral Society have District and Open Classes for Sections and Extracted Honey.—Apply for Schedules to Mr. P. E. Roberts, School House, Nether Wallop, Hants.—**Entries closed.**

July 26-27, at Cardiff, Sophia Gardens.—Glamorgan Bee-keepers Association, in connection with Cardiff and County Horticultural Society's Show. Open Classes. Special prizes: Taylor's W.B.C. Hive and Apis Club Bronze Medal.—Schedules from Secretary, Chas. F. Davies, 5, Borstal Avenue, Cardiff

August Bank Holiday.—Cambridge Mammoth Show. Open Classes. Special one bottle and one section class.—Schedules from Mr. E. C. R. Holloway, Burwell, near Cambridge.

August 3, at Uttoxeter.—Staffordshire Bee-keepers' Association, in conjunction with Staffs. Agricultural Society. Seven silver, six bronze medals, are offered, including B.B.K.A., Staffs. B.K.A., Staffs. Agricultural Society, and Uttoxeter Agricultural Society. Liberal prize money.—Schedules and Entry Forms from W. Griffiths, Solway House, Queensville, Stafford. **Entries closed.**

Monday, August 7.—Norton Ploughing Association, Sheffield. Annual Show. Three Open Classes for honey, etc. 6 jars of extracted honey (other than light), six sections of honey. Display of honey, wax, mead, etc.—Schedules and all information from Wm. Bashforth, 45, Bank Street, Sheffield.

August 7.—Melton Constable District Horticultural Show (Norfolk). Open Classes for one bottle of honey, 3 prizes; one section of honey, 3 prizes. The honey taken in lieu of entrance fees. —Send entries to A. Hamer and R. Meynell, Secretaries.

August 8 and 9, Abington Park, Northampton.—Northants. Bee-keepers' Association, in connection with the Municipal Horticultural Society's Flower Show. Open Class (entry free). Special prizes. 1 lb. jar of honey, 1st 20s., 2nd 12s. 6d., 3rd 7s. 6d.—Schedules from Mr. H. F. Swann, 41, St. Michael's Mount, Northampton. **Entries close July 31.**

August 10, at Madresfield, Malvern.—Annual Show of the Worcestershire B.K.A. Four Open Classes. Single 1-lb. bottle, prize 20s.—Schedules from G. Richings, 109, Northwick Road, Worcester. **Entries close August 5.**

August 10.—Bridgnorth and District Bee-keepers' Association, in connection with Bridgnorth Agricultural Show.—J. S. Lawton, Secretary, 14, Innage Road, Bridgnorth. **Entries close August 5.**

August 19.—Carmarthen and District Allotment and Horticultural Association. Honey: 14 Classes (7 Open) and three Medals (Apis Club Silver Medal, the B.B.K.A. Silver and Bronze Medals).—Further particulars and Schedules of Hon. Secretary, Harry Tew, 21, Priory Street, Carmarthen. **Entries close August 15.**

August 19, at Carmarthen.—Carmarthenshire B.K.A. Show. Good Classes of Honey, Wax, etc. Members' and Open Classes. Valuable prizes, including the Apis Club Silver Medal and the B.B.K.A. Silver and Bronze Medals. **Entries close August 12.** Schedules from H. Tew, Priory Street, Carmarthen.

August 19 and 21, Cannock Show.—Sixteen Classes for Honey (nine Open). Good Prizes. Schedules from Jno. Bird, Secretary, Stafford Road, Cannock, Staffs.

August 23, at Prestbury.—Gloucestershire Bee-keepers' Association, in connection with Prestbury Horticultural Show. Open class for 1-lb. jar. Prizes, 10s. 6d., 7s. 6d., 5s. (entry free).—Schedules from A. H. Bowen, Coronation Road, Cheltenham. **Entries close August 16.**

August 23, at Bartley Cross.—New Forest B.K.A., in connection with the New Forest Agricultural and Horticultural Association. Open and Local Classes for Honey and Appliances.—Schedules from Mr. W. Cooper, Marley House, Netley Marsh, Southampton. **Entries close August 6.**

August 26, at Hinckley, in connection with the Hinckley Sweet Pea and Rose Society's Annual Show.—Open to all bee-keepers. First prize, 12s. 6d.; second price, 7s. 6d.; and third prize, 4s.—Schedules are ready, and may be obtained by sending stamped, addressed envelope to the Hon. Secretary, A. Kimball, 119, Clarendon Road, Hinckley, Leicestershire. **Entries close August 21, 1922.**

August 30, at Chester.—Cheshire B.K.A., in connection with the Cheshire Agricultural Society's Show. Open and County Classes. Good prizes. Send one jar to Gift Class for Chester Hospital.—Schedules from T. A. Beckett, Saint Werburgh Chambers, Chester.

August 31, 1922.—Winchester Domestic Live Stock Association Show. Schedule of Honey Classes Open:—Class 5, one shallow frame· Class 6, six sections of 1922 honey; Class 7, six 1-lb. screw stoppered bottles of 1922 honey; Class 8, trophy of bee products to be arranged on table space 3 ft. by 3 ft.—Entry Forms to be obtained from M. W. Castle, 80, High Street, Winchester.

September 2, Corn Exchange, Rochester.—Medway and County Bee-keepers' Association, in conjunction with the Allotment Holders' Vegetable, Fruit and Flower Show. Eleven Open Classes, including trophy, for which a silver cup is offered. Entry fee for open classes, 1s. each.—Schedules from Mr. A. R. Castle, Y.M.C.A., Maidstone Road, Rochester. **Entries close August 19.**

September 2.—Peterborough, Oundle and District Bee-keepers' Association. Show of honey, Co-operative Hall, Peterborough. Members and Open Classes. Open (entry fee 2s.), 12 bottles Extracted Light Honey, first prize, £1 10s.; second, £1; third, 10s. Gift Class (entry free). Bottle Extracted Honey to be sold for N.U.R. Orphan Fund. First prize, W.B.C. hive; second, Appliances 15s.; third, 7s. 6d.—Schedules and Entry Forms, G. H. Seamer, Hon. Sec., Waterloo Road, Peterborough. **Closing date, August 19, 1922.**

September 9.—Middlesex Bee-keepers' Association, in conjunction with the Brentford Allotments Association Annual Show, at the Wesleyan School Hall, Clifden Road, Brentford. Twelve Open Classes for Honey, Wax, etc.—Schedules and Entry Forms from R. R. Babbage, 55, Whitestile Road, Brentford, Middlesex.

September 16 to 22.—British Bee-keepers' Association Annual Show at Grocers' Exhibition, Royal Agricultural Hall, Islington, London.—Schedules from Hon. Secretary, B.B.K.A., 23, Bedford Street, Strand, London, W.C.2. **Entries close certain September 4.**

September 27. — Altrincham Agricultural Society. Largest one-day show. Several Classes for honey, etc., both open and local. Good prizes. Send one jar for Gift Class, to be given to Hospital.—Schedules from H. Turner, 1, Market Place, Altrincham.

October 12, at Ongar, in connection with the Ongar and District Agricultural Association.—Extracted and Comb Honey. Open to Essex.—Schedules from G. A. Taylor, Hon. Sec., Ongar and District Bee-keepers' Association, Ashcroft, Ongar

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One Penny per Word.

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PRIVATE ADVERTISEMENTS are only intended for readers having **Surplus Stock** *to dispose of.* **Driven Bees, Nuclei,** *and* **Queens that are reared or imported for sale,** *are Trade Advertisements, and can only be accepted under trade terms. A charge of 6d. extra per insertion will be made if a box number is used.*

PRIVATE ADVERTISEMENTS.

CARNIOLANS, Jan Strgars, 10 frames, and super crowded bees, brood and honey, £4 10s.; also few Stocks Blacks, £3 each; all guaranteed healthy; purchaser to send crates; cash with order.—BRAITHWAITE, Kinver, Stourbridge. g.58

FOR SALE, 10-frame Stock Italian Bees, strong and healthy, 1922 Queen, £3 10s., carriage forward. — MISS G. GARDINER, Whiteleaf, Princes Risboro', Bucks. g.59

SURPLUS BEE APPLIANCES for Sale, cheap. Bar-frame Hives, Section Racks, Supers and Drawn-out Shallow Frames, Excluders, etc.—WOODS, 11, Barham Road, Croydon. g.60

TO CLEAR, Shallow Frame Crates (new), fitted "Weed" foundation (wired), 10s. each. Also other bargains.—LONGLEY, 35, Tharp Road, Wallington, Surrey. g.61

TWO CARNIOLAN STOCKS, 10-frame each, in W.B.C. Hives, new this year, both two racks, and strong Nucleus colony on 6 frames in small hive; also Swarm in skep, travelling box, Observation Hive, all accessories; new condition; inspection by appointment; owner no time to attend. Who will take the lot away for £12?—MARLOW, 5, Forest Drive East, Leytonstone, E.11. g.62

QUEENS.—Few Italian and Hybrid Virgins, champion honey-getting strain, 2s. 9d., post free.—LITMAN, Castle Cary. g.64

OVERSTOCKED.—Ten-frame Stock Hybrids, guaranteed healthy, headed by vigorous 1922 Queen, 55s.; also strong established Stock Italian Hybrids in skep, headed by vigorous 1921 Queen, 40s.; genuine bargains.—LEE, Glenmar, Southminster. g.63

SURPLUS STOCKS.—Healthy Bees for Sale. JEWITT, Hensall, Whitley Bridge, Yorks. f.139

STOCKS FOR HEATHER.—Three extra strong Stocks, Italians, covering 26 frames now, ready first week August; scientifically packed.—Particulars, LITMAN, Castle Cary. g.65

EXCHANGE Primus Lamp (as new) for bee goods, or sell 20s. T. ATKINS, Ripple, Tewkesbury. g.66

QUEENS. A few selected 1922 Fertile Italians and Carniolans, 8s. 6d. each; also Italian Virgins, 5s. 6d. each. ERNEST BLISS, Ranmoor, Dunstable. r.g.83

VIRGINS, ex swarmed stock prolific Blacks, 4s. 5d. each. Twenty Deeps, 37, Suffolk Street, Birmingham. g.82

BEES. Surplus Hive for Sale, containing Swarm, 1922 good fertile Queen, bees covering 10 frames, brood. Italian Hybrids, £5.—FRESHWATER, 116, Hampton Road, Twickenham, Middlesex. r.g.84

ENGLISH Light to Medium Honey wanted in 28-lb. tins; lowest price delivered free Burwell; tins free. Black Queens or crossed for Sale, 1922 reared, 2s. each.—THOMAS, Bartle Cottage, Exning. g.87

NATURAL ITALIAN SWARMS, healthy, in new skeps, 35s.—TURNER, 47, Gaisford Street, London, N.W. g.26

FOUNDATION PRESS, brood and shallow combined, new, unused, 40s., delivered. Wanted, Beeswax, any quantity.—HITCHIN, Marlborough Road, Long Eaton. g.27

OVERSTOCKED.—Immediate delivery. Very strong 6-frame Stock, headed by 1922 Jan Strgar pure Carniolan Alpine Queen, 63s., carriage paid. R. V. ROBERTS, 50, Otter Street, Derby. g.28

OVERSTOCKED.—Strong 10-frame stocks for sale, Hybrids, £3; Italians, £3 5s.; Carniolans, £3 10s.; box 10s., returnable.—ANTHONY, 34, Knavesmire Crescent, York. g.57

BEES.—Surplus for Sale, Hybrids or Blacks, 5 frames 30s., 6 frames 50s.—EVANS, Lattiford, Wincanton, Somerset. g.31

8-FRAME STOCK, with young Queen working in sections, no disease, also hive, £4; bees carriage paid hive forward.—J. CLAYTON, Quay, Dartmouth, Devon. r.g.51

PURE ITALIANS, 1922 Penna imported Queens (none better), 6 frames, 40s.; 8, 45s., 10, 50s.; carriage paid 50 miles; boxes returnable (overstocked; must clear).—WADHAM, Gold Street, Cardiff. r.g.6

WANTED, small Pump for tank in greenhouse. —Price and particulars to W. HERROD-HEMPSALL, Luton, Beds. f.108

FINEST ENGLISH HONEY, quality guaranteed, in 28-lb. tins, 1s. 5d. per lb.; tins free; f.o.r. HARVEY, Apiarist, Andover. r.g.25

BEES FOR SALE, Stocks free from disease; good Queens.—FULLARTON, Memsie, Aberdeenshire. r.f.154

STOCKS.—Strong, eight frames, for sale, 40s.; delivery London.—Box 86, 23, Bedford Street, Strand. g.89

BEES (Italian).—Several good stocks, in W.B.C. hives, made of 1-in. timber throughout and well painted; 7 guineas, or near offer.—Apply, H. S., c o DOVE, 18, Victoria Street, S.W.1. g.88

STOCK of Bees, standards, 50s.; another, £3 10s.; 10-frame stock, on Commercial frames; what offers?—COBB, 33, Bevan Road, Plumstead. r.g.90

MODEL VERTICAL STEAM ENGINE for Sale, cylinder bore 1½ in., stroke 1½ in., slide valve, height 10 in., well made; also piece of 4-in. Copper Tube, sealed both ends, suitable for boiler, 35s. the lot; carriage extra; a bargain.—Box 79a, B.B.J. Office, 23, Bedford Street, Strand, W.C.2. f.141

SELL.—Rotax all-brass Motor Car Head Lamps, self-contained acetylene, very powerful, 30s. the pair; two small powerful Acetylene Brass Head Lamps, with separate generator, suitable light car or cycle car, £3 the set; Austin Rear Wind Screen, hamogany framework, £7; Mills' Automatic Acetylene Generating Plant, suitable for 10-roomed house, £6; quantity of Acetylene Gas Brackets and Chandeliers, prices with particulars; small folding Magic Lantern, 30s.; motor cycle all-rubber Ponco, reaches to ankles, wind- and weather-proof neck and sleeves, 50s.; all carriage forward.—HERROD-HEMPSALL, Old Bedford Road, Luton, Beds. c.77

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THE WISE BEE-KEEPER looks for quality. The South Hampshire Apiaries breed only from the very best strains. Result: Quality and satisfaction. Beginners' Outfits from £5.—All communications, H. E. NEWTON, New Milton, Hants.

ITALIAN STOCKS, 1922 Queen, on 10 frames, strong, healthy, ready for heather harvest or otherwise, immediate delivery, 2 guineas; returnable box.—SECRETARY, Pembrokeshire Bee Association, Letterston. r.g.86

HEALTHY DRIVEN BEES, with Queen, 10s. 6d. per lot, carriage paid, commencing August 1; orders now booking in rotation; cash with order; boxes returnable.—PULLEN, Ramsbury, Hungerford. r.g.71

SWARMS, ITALIANS, 5s. lb.; carriage paid on 4-lb. lots; Nuclei, crowded 3 frames, young fertile Queen, £1. — BOWREY, Swallowfield, Reading. g.76

MUST SELL.—Several 3-frame Nuclei, 1922 Italian Queens, 20s.; guaranteed healthy; overstocked.—MORTON LOWE, Park, Chilwell, Notts. g.77

GRAFTON QUEENS are always reliable. Italian fertiles, 8s. 6d.; virgins, 3s. 6d.—MASOM & HEDLEY, Grafton Regis, Stony Stratford, Bucks. g.78

IMPORTED ITALIAN QUEENS, Penna or Tortora, 7s.; 4-frame Nuclei, 30s.; Stocks, 8-frame 50s., 10-frame 60s. Registered breeder under Kent Education Committee.—HENSLEY, Luton Apiary, Chatham. g.80

BOTTLES! BOTTLES!! BOTTLES!!! — Lb. screw-top Honeys down again. 1 gross, 29s.; 3 gross, 28s.; 6 gross, 27s.—HENSLEY, Luton Apiary, Chatham. g.81

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SUPERIOR TINS, ideal pattern, handles, bolted lids, 7 lbs., 10d.; 14 lbs., 1s. 2d.; 28 lbs., 1s. 9d.; carriage extra.—BOWEN. g.68

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HONEY JARS, Bottle Boxes, Showing Requisites. Write for prices.—BOWEN, Coronation Road, Cheltenham. g.70

STRONG STOCKS BEES on 9 and 10 combs, 45s. and 50s. each; also 4-frame Nuclei, 25s.—CHRISTIE, Hill View, Oxted Road, Godstone, Surrey. g.72

QUEENS.—Italian, 8s.; Hybrid, 7s.; Virgins, 2s. 6d.—TICKELL.

BLACK FIRST CROSS ITALIAN, a few only, 3- or 5-comb Nuclei, 27s. 6d., 32s. 6d., carriage paid; box 10s., returnable; Queens, 7s. Lists free.—JACK TICKELL, Queen Breeder, Westbourne Apiary, Cheltenham. g.73

QUEENS, Italian, 1922, Penna's strain, fertile, 10s. 6d.; virgins, 3s. 6d.; gentle; Nuclei, 3 or 4 frames, 32s. 6d., 40s.; box 10s., returnable.—WARD, Deeside Nursery, West Kirby. r.g.74

FOR SALE, Simmins' Double Conqueror Hives with section racks and supers, in very good condition, £5 each.—E. R. DEBENHAM, Bladen Apiaries, Dorchester. r.g.75

4-FRAME HYBRID NUCLEI, with 1922 Penna Queens, £2 10s., carriage paid.—DOGGETT, Abbey Apiary, Beche Road, Cambridge. r.g.79

LIMITED NUMBER healthy Driven Bees with 1921 and 1922 Queens in set, 17s. 6d. each, carriage paid. Orders booked in rotation.—G. A. GILLETT, New Road, Moreton-in-Marsh, Glos. g.85

HONEY BOTTLES, Jam Jars, Fruit Bottles; lowest wholesale prices; stocks, London, Dudley, Hull; order now.—H. BUNNEY, Dudley. r.g.34

TORTORA QUEENS.—Write for reduced prices. —HULBERT, "Chalet," Warwick Road, Olton, Birmingham.

FOR THE HEATHER.—Renowned 6-frame "Utility" Stocks at 45s., carriage paid; 10s deposit on travelling box.—LEE, the Beeman Burgess Hill, Sussex. r.g.54

IMPORTED PENNA QUEENS, return, 8s.; 3-frame Nuclei, Penna Queens, 30s.; English Queens, 8s.; Italian or English Virgins, 4s.—STONE, Chelsea Road, Easton, Bristol. r.g.56

QUEENS AND NUCLEI.—Write, HULBERT. g.46

HONEY BOTTLES.

1 lb., 1 gross, **30/-**; 3½ gross, **29/-**; 7 gross, **28/-** per gross.

COBB BROS.,
33, BEVAN ROAD, PLUMSTEAD.

For best bees, queens and appliances come to PEARSON & GALE, Marlborough.

PENNA QUEENS.

Address:—E. PENNA, Casella Postale 178, Bologna, Italy.

PRICE LIST FOR 1922.

	July.	August.	September.
One Young Pure Fertile Italian Queen	8/-	8/-	8/-

SPECIAL OFFERS, until countermanded, for queens in lots of 4 at a time: From July 1st to July 31st, **£1 4s.** Orders booked in rotation, cash with order, carriage paid, safe arrival guaranteed. Payment by cheques or British postal orders. International money orders are **not** accepted. 10% discount to Apis Club members on my prices, **except** on "Special Offers."

STRICTLY BUSINESS.—One dozen Flavine—S B. Powders, 1s.; a Japanned Sprayer, 6s.; the Acarine 1921 Eclipse Pad, 2s. 6d.; all post paid.—S. H. SMITH, 30, Maid's Causeway, Cambridge. g.49

PENNA STOCKS ARE BEST.—Famous 6-frame Stocks headed by young fertile imported Penna Queen, delivered immediately for 50s.; 5 frames 30s. Cleopatra Stocks at same price.—THE THAMES VALLEY BEES (Regd.), Teddington. r.f.172

GOLDEN ITALIAN QUEENS.—These superior British-reared Queens need no recommendation; Fertiles 10s. 6d. in rotation.—E. COMMBER, Specialist Breeder, 64, Ronald Park, Westcliff-on-Sea. f.170

FINEST ENGLISH HONEY in 28-lb. cans, 1s. 4d. lb; tins and carriage free.—PEARSON & GALE, Marlborough, Wilts. r.f.171

QUEENS.—Fertile 1922 Italian Hybrids and Carniolan-Italian by return of post, price 8s. 6d. each.—HOSEGOOD, "Beecot," Cliff End, Purley, Surrey. g.1

BEES REARED ON ALF. RYALL'S LINES keep well. Buy his advice.

"WIGHT" AND "ACARINE" DISEASES.—Prevention and removal; invaluable advice; 5s. 6d. "An eye-opener."—ALF. RYALL, 8, Ospringe Road, N.W.5. r.c.87

4-FRAME Nuclei Travelling Boxes, 6s. each, carriage paid.—LEE, the Beeman, Burgess Hill, Sussex. r.f.99

ITALIAN FERTILES, 8s. 6d., four 28s.; prompt delivery.—ATKINSON, Fakenham. r.f.96

5S. 6D.—IMMUNE QUEENS.—COBB, 33, Bevan Road, Plumstead r.f.102

SURPLUS SWARMS AND NUCLEI of very best strains in Italian, Dutch and Hybrid; low prices.—WILKES, Expert, Pelsall, Walsall. r.f.45

QUEENS by return from April till October.—PEARSON & GALE, Marlborough. w.14

BUYERS of Sections and English Run Honey are THE VIKING FOOD & ESSENCE CO., 12, Brandon Road, King's Cross, who will be pleased to purchase and receive offers. r.e.156

JACK TICKELL.—For Queens, Stocks and Nuclei. List free.—Westbourne Apiary, Cheltenham. r.a.84

BOOK NOW!—Choicest home-bred Carniolan Queens for 1922.—PEARSON & GALE, Marlborough. b.24

DUTCH BEES.—Send for my artistically Illustrated Catalogue outlining my method of managing bees profitably. Read my notes on Queens and Queen Rearing. Will interest the expert and amateur. Free for the asking.—WHYTE, Bee Farm, Cumbernauld Station, Dumbartonshire. r.b.32

PENNA QUEENS.—Please note precise address: ENRICO PENNA, Casella Postale, 178, Bologna, Italy. r.c.141

GORDON ROWE, 28a, Moy Road, Cardiff, requires gross lots new 1st grade Sections.

PARCHMENT CONTAINERS, stamped "Fine Lemon Curd," offered at half price to honey producers who can affix labels over the printing, 1 lb., 4s. 9d.; ½ lb., 4s.; ¼ lb., 3s. 6d.; ⅛ lb., 2s. 3d. per 100. Add for carriage 1s. 6d. to each 5s. value ordered. Terms cash.

BEES wanted. Queens for Sale, 7s. 6d. each.—BEE SUPPLIES & PRODUCTS ASSOCIATION, LTD., 39B, Wandle Road, S.W.17. f.47

W. P. MEADOWS System, Leicester

New Hive Tool, Two Patterns, 2/6, 3/6

FOR LATE SWARMS.

We are again able to offer delivery by return of frames fitted with wired foundation, ready for use. Per set of ten, 12/4 post free. Safe arrival guaranteed.

BURTT & SON, GLOUCESTER.

We can also offer section cases correctly glazed for exhibition purposes at 3/6 per doz., postage 1/-. Fully illustrated catalogue of appliances free on application.

ITALIAN QUEENS by RETURN OF POST. Tested, 9s. 6d.; Untested, 7s. 6d.—PEARSON & GALE, Marlborough.

ENRICO BOZZALLA

Queen Rearing Apiaries

Italy——CREVACUORE——Novara

Sig. Bozzalla begs to announce that from the beginning of July, 1922, onward the famous **BOZZALLA QUEENS** (A.B.J. specification, tested three-banded Italians) are no longer being supplied to Messrs. Pearson & Gale, Marlborough.

BOZZALLA QUEENS can henceforth only be obtained through his sole agent—H. M. Stich, Riccartsbar Av., Paisley, to whom all enquiries and orders should be sent.

Special arrangements have been made to deal with urgent telegraphic orders direct to Italy, from customers. Large numbers of queens are on hand for instant despatch from Crevacuore. Liberal discount for quantities.

July price 10/- each.

Telegrams :—"Bozzalla, Crevacuore."

THEY are mowing the Sainfoin here in the foothills. On Monday we migrate to Maure, par Seyne-les-Alpes **(4,390 feet above sea-level)** where the Sainfoin is just opening its first flowers and will be followed by sage, mountain thyme, lavender, winter savoury, alpine pasture plants and spruce honey-dew, making together a **heavy honey-flow lasting until the Autumn rains and frosts. Queens reared during a heavy, natural honey flow are Nature's best queens.** Only one other breeder on earth, (California, U.S.A.) goes to such trouble and expense in insuring choice queens for his clients : **I** deserve **your** orders ; can **you** afford to order elsewhere ? Only the best queens bring the big profits ; and when you are satisfied, so am I : is that fair ? An **American Beauty** (pure) or a Carniolan Alpine queen mated to an **American Beauty** drone—July 9/-, Aug.-Sept. 8/-. Cash with order.

SKIPWITH CANNELL **Maure, par Seyne-les-Alpes, B.A., France.**

For BEST Bees
BEE Hives
BEE Appliances

Send to **C. T. OVERTON & SONS,**
CRAWLEY, SUSSEX.
1922 Illustrated Catalogue Free. Established 1883.

FAMOUS COTSWOLD QUEENS

¶ RAISED IN A NOTED HONEY DISTRICT COTSWOLD QUEENS ARE UNQUESTIONABLY THE BEST YOU CAN BUY. ENSURE POWERFUL COLONIES FOR THE HEATHER AND FOR NEXT SEASON BY INTRODUCING COTSWOLD QUEENS NOW.

SPECIAL JULY OFFERS.
SELECTED QUEENS, ONE 9/-; THREE 24/-.
VIRGIN QUEENS, ... ONE 3/-; THREE 7/6.
LIEUT. A. H. BOWEN, CORONATION RD., CHELTENHAM.
Artistic Booklet Free.

The Bee-Keepers' Calendar.

JULY, 1922

27 Thursday. "Chaunteth not the brooding bee
Sweeter tones than calumny?" *Tennyson, "A Dirge."*

28 Friday. "Sing hid, sweet honey
That no bee sips;
Sing red, red roses—
And my Love's lips."
A. Dobson, "A Song of the Four Seasons."

29 Saturday. "Still all attuned to nature's melodies,
He loved the bird's song in his door-yard trees,
And the low hum of home-returning bees."
J. G. Whittier, "The Pennsylvania Pilgrim."

30 Sunday. "My son, eat thou honey, because it is good; and the honeycomb, which is sweet to thy taste; so shall the knowledge of wisdom be unto thy soul." *Proverbs*, xxiv. 13.

31 Monday. Remove surplus honey before the flow ceases, and thus avoid angry bees and robbing.

AUGUST.

1 Tuesday. Do not start robbing by leaving any honey or combs about where bees have access.

2 Wednesday. "With the open air and a leisurely life,
Homespun, and spaniels, and honey,
An eave full of swallows, a sun-browned wife
He's never a thought for money." *T. Farquharson.*

Seasonable Hints.

The season so far has been disappointing, and it does not appear that the "bumper" crop of honey will materialise this year. Some of our correspondents query whether a dry or a wet season is the better for honey production. So far as our own observation goes we think a wet season is more favourable than a dry one, *provided it is also warm*. Temperature is the deciding factor, a wet, cold summer being the worst time of all. The last few weeks have given us weather of that description, and bees have been unable to do much foraging.

Last week several days were much warmer, with more or less sunshine, and swarms were numerous for so late in the season. This swarming is also one result of the previous cold and wet weather. It is well known that the worker bee works itself to death in a few weeks during the summer, if the weather allows it to do so, but as bees are unable to work during unfavourable weather they naturally live longer; the population of the hive is also being added to by the brood from the great number of eggs deposited several weeks earlier coming to maturity, the result from these two causes being overcrowding of the hive, the rearing of young queens, and a swarm on the first favourable day. It is too late in the season for a swarm to build out comb and become established for winter without some help from the bee-keeper, except under very favourable circumstances.

We prefer to return a late swarm to the parent stock. It is a great help if a new colony has to be established to give it drawn-out combs. As many of these as can be spared may be taken from other stocks, being replaced with a frame of foundation. The work of comb building is thus distributed among several colonies instead of all being done by one. Feeding should not be neglected, especially if weather conditions are unfavourable.

Now is the best time for requeening where necessary. If done now the young queen has time to settle down, and populate the hive with young bees before the cold weather comes.

A Dorset Yarn.

"I will bring you to a land that flows with milk and honey."

Dorset is just such a land as was promised to the Israelites of old. It is famed for its butter and cheese; it ought to be the richest for honey. The pasture fields are full of wild white clover, and in some parts with the wild thyme, now in full blossom; this, with the rock rose and almost every variety of clover, looks like the bee-keepers' paradise. These flowers were much in evidence when at St. Giles' Flower Show last Wednesday. It was held in the large park of the Earl of Shaftesbury, where everything is on such a large scale—large house, large gardens, large trees, sycamore, birch and lime, every tree in which bees delight growing in the rich soil to gigantic size. Then, with the grass studded with so much bee forage, one could not help but yarn of "the land that flows with milk and honey," a delightful place and delightful weather. Mr. Garret, who was manipulating the bees, said, "We shall not want smoke." He laid a 'kerchief carefully over the bars as he pulled back the quilt; this is easily done by taking the two corners of cloth and quilt in each hand, as one is pulled gently off the other covers the bars, and the smell of Izal on the cloth sends the bees down. The bars were all new, and combs had been drawn out and were full of brood, though it had been hived but little more than a month. It must have been a laying queen with the swarm. There were no queen cells, but in some frames was an inch or so of drone cells built at the bottom and corners. It looked as if the workers were preparing to re-queen themselves; they do not leave things to chance. Though this hive was moved about for a long time as Mr. Garret showed them to the people, the bees were as quiet as possible; in fact, one of the audience went into the tent where Mr. Pinder, of Salisbury, had a collection of bee appliances and told him "those fellows had doped the bees so that they could not sting." Mr. Pinder had books on bees, "Cowan's Guide Book," "Bee-keeping Simplified," etc. When last I tried to get Cowan's Guide it was out of print. This shows that this is much sought after. The hive shown belonged to the Countess of Shaftesbury, a W.B.C. pattern made by Mr. Pinder, junr. Many are advocating the American hives and the larger bars for our bees, but to me it seems best to keep to the one size, as bars then are easily transferred to other hives. Though I have seen the large bars and large hives full of bees, one who has a lot wants uniformity.

Bees on the farm are making good. I had thought that we should have 500 unfinished sections, but unloading them on to others that had finished their lot we are getting them completed. It must be the extra stores found in the flowers. The hives seem to make a louder hum at night. One lot that would not go in the sections, though very strong, had a box of standard bars put on last week. Though on the top of the sections, they have never left the bars, and are working with that feverish haste that the bee-keeper likes to see.

We have had a week of swarms, and such huge ones from the hives with three brood boxes, two of which always had brood in them. When one saw them come out it was easy to send them back after looking over the combs for extra queen cells, and there were a lot of them, but where one could not tell from which hive they came these had to be given another home. Even these are finishing off sections. They were so large, and flowers are plentiful, they must store the honey somewhere. We had two lots out at one time, a black lot and a yellow one. They were each shaken into different skeps. I saw the yellow queen as I shook off a little cluster before shaking the larger lot. It is easy to see a yellow queen in a little lot. After seeing her I shook the big lot in the same skep. Going over to the black lot on a privet hedge, I shook them into the largest skep I had, letting it rest on three pieces of brick. Within an hour the yellow lot left the skep and joined up to the blacks. There was no room inside the skep, so they covered the sides and top, and crawled beneath on the bricks and grass, the largest mass of animal life I have ever seen together. I suppose the yellow queen was out for mating, and went back to the hive after me turning over the bees to find her before shaking the larger lot, and they went over to the blacks after missing her. What was to be done with this lot of blacks and yellows? They could not be separated. There were too many for either hive from which they came. I had to prepare them a new home and some section racks with an extra lot of standards. Was it Kipling who wrote that East and West will never mix? But yellows and blacks are mixed up in this lot; it was the heaviest lot of living creatures I have ever carried. There was quite enough for a good swarm left on the grass as the skep was lifted. I had a few stings on the fingers as I carried them to their new home. The

hive was well lifted in the front, but they did not all get in before it was quite dark. In the morning there was still another great cluster hanging on the hive. An Izal cloth soon made these scamper off inside with the rest. There may have been a queen, but I did not see her. J. J. KETTLE.

Jottings from Huntingdonshire

It's a long, long time since man first began to domesticate bees, and I suppose ever since bee-keepers have pegged away at the craft with consummate optimism. Each year brings its hopes, which are sometimes fulfilled and at others so shaken that the heart is sad. This sadness is increased when the bees are sad too. We stoically look on when we see the sweets of the supers taken rapidly down to keep the embryo citizens alive in the brood nest, but when our bees begin to reveal those pathetic movements which bespeak not only rapid depletion of stores but dread lest, first, they should not be able to maintain the necessary heat within the hive and, secondly, lest they should be assailed at any moment by robbers bent on stealing what little stores there are. This pathos, as we know, develops into frenzy when every possible foraging bee goes forth to try and get nectar. The sun has scarcely risen in the east when forth they go, and long after he has sunk in the west they are busy with their quest. If still the demand exceeds the supply they become desperate and themselves go robbing. Once this starts demoralisation sets in, and it may be in this mad struggle for existence many a stock succumbs through starvation after the battle. There are bee-keepers who will state that this is not an unmixed evil, and the fittest survive while the weakest go west. In this case the hungry bee is the desperate bee and also the angry bee. Angry, hungry bees will attack bees more fit, but which, being well fed, are not prepared for desperate attacks, and overcome them and ultimately reduce their stores. It is true, I know, bees demoralised through hunger will attack stocks, rob them, fill up their empty combs, only in turn to be attacked by the robbed stock, which is now reduced to hunger, and thus, it will be argued, the survival of the fittest is assured. I would reply that the stock which was first robbed would suffer severely from a numerical point of view, and be thus rendered less able to organise a counter-attack, and also when the robbing was in progress the rapid influx of honey on the part of the first hungry stock would set the queen ovipositing with renewed vigour, and thus the chances of survival would be increased. Good bee-keepers endeavour to prevent robbing, but protective measures at the city gates are not enough; contrivances to keep the robbers at bay do not fill their honey sacs, the best and surest way is to feed, and if August feeding is necessary let it be done in the open air. If by chance you have any loaded supers put by for extracting, extract now and place the empty combs out in the open some fine evening after an early tea and let the bees clear them up. If your extractor will not be needed again for a few days let the bees clean that out too; they will do it thoroughly. When this is complete syrup, not too thick, should be placed out in shallow pans, the syrup just covering the bottoms and many lengths of stick dropped in to enable the bees to take their fill without distressing themselves. One must judge from the number of stocks what quantity is needed. A pound of sugar will make sufficient syrup for three or four stocks. See that it's all cleared up during the evening.

Why, some may ask, am I writing in this strain, and in July too? Well, there are loads of nectar-secreting flowers about, and the past week has not been a very wet one, yet in the majority of my hives I note the stores are less than a week ago. This, it may be explained to the uninitiated, is the result of the lack of warmth. Flowers need warmth, otherwise they cannot secrete the nectar, and the general temperature during the past week has been all against the bees. I have just seen a weather forecast which speaks of a considerable spell of cool days; this means a big raid by the bees on their surplus stores. Let me give an instance of what this means. A Carniolan stock ten days ago had corner-capped honey on ten combs. Comb 11 had half the comb of sealed honey; comb 12 was a slab of honey sealed on the one side, partly so on the other. To-day there is not one superficial foot of sealed honey in the whole hive, and as there are, I should say, from forty to fifty thousand bees in that hive and much unsealed brood, the raid on the stores is immense. Should the cool weather continue, it does not need any great intelligence to diagnose what will happen to this particular colony of bees unless steps are taken to supply the requirements of the hungry little creatures. Should the weather improve and warmth and sun cheer the landscape the whole outlook for bee-keepers would be changed. In this district a great flow is awaiting the right weather. The brambles are smothered with buds and bloom, the knapweeds are covering the roadsides along with the purple restharrow. Vetchlings and clovers are still a-blow, while mustard offers much, to say nothing of the late-flowering limes, which have been so richly scenting the air of late. One month of sunshine and warm breezes and we should see the bees filling up the empty cells below and above and look forward to their going into their winter quarters snug and well supplied.

E. F. HEMMING.

Steeple Gidding.

Harrow and District Bee-Keepers' Association.

An exhibition of honey and bee appliances will be held in conjunction with the Sudbury and Wembley Horticultural Show on Saturday, July 29. An outdoor lecture on bee-keeping will, weather permitting, be given by Mr. W. Herrod-Hempsall.

K. Young, J. L. Rogers, Hon. Secretaries.

Week-End Bee-Keeping.

By S. H. Smith.

(*Continued from p.* 352.)

During the following week a note came from the D. B.s After thinking the matter over they decided not to accept what they were pleased to call my "too generous" offer. So that was that, and there was nothing to do but to continue with the old plan.

The sudden burst of summer weather in May had brought all strong bee stocks to boiling-over point, and orders for eight-frame stocks were pouring in. No. 1 apiary, doubled and divided, was sold out early, and No. 2 was booked up to the last bee. By May 20 it looked like bees would have to be bought to help fill the demands. The two bee stocks in the D. B. garden were ripe and ready, and if milked to supply a couple of eight-frame stocks it would open the eyes of D. B. to the possibilities offered by modern bee-keeping methods.

Before pedalling out to the D. B. domain I looked over a parcel of queens just arrived from Italy, picked out two good ones, and put them in my pocket.

It was a lovely day, as if made to order, and, gliding along under the shade of the lime-tree avenues I felt elated and uplifted. Two fine bee stocks, headed by fine, vigorous queens, would be shortly working, increasing and piling up riches in distant parts of our country. With a song in my heart and in a highly virtuous mood I arrived at the house punctually at high noon.

There was a deserted look about the place. Doors were shut and windows closed. It took some searching to find D. B., and he was making a bluff in an overall suit about digging in the garden.

"How now, old gravedigger? Why is the portcullis down? Don't you feel that this is our festal day? Why here was I expecting signs of merriment, a fatted calf turning on a spit, and gaily-clad maidens doing things with flutes and cymbals. Why the gloom, old man?"

"There's gloom enough and to spare, Week-End. The wife and children are out for the day on a shopping expedition. That's something the consequences of which you know nothing about. The gloom will last till tea-time. But let us get at those bees. I'm ready to work them overtime if there is anything to be got out of them. I'm beginning to doubt it. First you trot them along as 'paying guests,' and then you hedge a bit by labelling them as 'friends.' Well, last Sunday while the wife and I were discussing your proposition to bring her into the firm along comes a 'friend' and planks a sting in my ear. All the week I've had to put up with ribald remarks re my 'cauliflower' ear."

"Which ear? But don't worry, old croaker, the season has not really started, though the sainfoin fields are showing pink. But let us adjourn to the workshop, as I want to show you something."

And there were my two hives, in which the bees had come, standing outside the workshop door and glistening in new coats of white enamel paint. I rubbed my hands when I saw them. "Thanks, D. B., old man, you show a rare understanding and a kindly courtesy that is much appreciated. I don't remember ever having a loaned hive returned in such good order."

And when we entered the workshop there stood my enamel pail, filled with clean water. And the basin, soap dish and towels were all neatly laid out on a low table. "The magic touch of Madam! Truly my feet have led me into pleasant places. You are a lucky dog, D. B."

"Before handling queen bees it is essential to wash up, and I like to use a pure, unscented, white Castile soap. Strange odours from the perfumed brands may lead to unpleasantness when introducing. There we are. Now for business."

"I propose we milk those two stocks in your garden and sell off two eight-frame lots right now. Here's the cheque, £7 10s. Yes, it is exactly the same amount you handed me last Saturday. No, no, there is no hanky-panky about it. Look at the signature, and here is the address of the signer who has bought the stocks. He lives, as you see, a good ways off—all the worse for us, as we pay the carriage. Yes, I have endorsed the cheque and you will credit each of us with one-half the amount. Please note, as per order, that both stocks are wanted by June 1, and that one is to be headed by a clipped queen. So there is plenty of time, but having queens on hand I've brought along two."

"Don't get excited, D. B. It is an everyday occurrence at this season in bee-farming circles, and I should not have passed on the order if I had any good stocks left. And don't imagine that cheque is all profit. Let us figure it out. You will credit me with £1 4s., the cost of the two May queen bees. You will also credit me with £1 12s., the cost of the sixteen drawn-out combs I am losing. It will save me the trouble of carting them back to my apiary, but I'm not keen about parting with them. There is also the yet unknown amount to be charged to carriage. There is no 'get-rich-quick' game about it, but one obtains a fair interest on the turnover."

"Having settled that let us examine the queens. They arrived from Italy this morning. As you have been practising clipping the wings of drones you may like to try your hand on a queen."

"We shall have to shut the door and the window. We now tear off the wire cloth cover. Most of the bees take wing and fly to the light and buzz up and down the window pane. Watch the queen. She is balancing herself for flight. There she goes! Of course she can fly, just as well as any other bee, when she is not laden with eggs."

"What now? Why, we just catch her

by the wings between the right forefinger and thumb. Now, with the left forefinger and thumb, we can take her by the legs, or by the head and thorax, leaving her wings free. Then we open the scissors and—snip! off go the wings on the left-hand side. We put her into a clean cage supplied with queen candy, nail on the wire cloth and cover the cage to keep it dark."

(To be continued.)

Notes from Gretna Green.

Although the pastures are still white with clover blossoms, very little honey is being gathered from this source, but bees are busy on bramble blossom, and storing fairly well. Our first swarm came off last Saturday (22nd), and I noticed that its brood combs were almost honeyless, while the combed sections given on June 15 were only partly sealed, and those with full sheets foundation scarcely touched. Honey exhibits at the Highland Show reflected the untoward nature of the season, and last year's produce had to fill the void. While there, I noticed the collection of expensive appliances and could not help remarking, à la Diogenes, "How many things there are that *bee-keepers* do not want."

Appliances are most decidedly too high in price, and a resolute effort is required to bring manufacturers' charges downward.

After all, the only articles we *must* buy every season are sections and foundation, and other appliances can be made at home.—J. M. Ellis.

Jottings from Ashdown Forest

Mid-July is past, the bee-keeper of energy has plenty to do, though so far it is not taking off, packing and selling honey. The weather has made that impossible where not ruined by the propensity of bees to swarm, under often the most extraordinary conditions. There is an enormous lot of vigorous bees still left after the wastage caused by the (of late) propensity to sting. If only the weather changes there is abundant chance even yet for a record crop of honey. Many stocks, and swarms especially, not fed, have suffered badly, and desertion swarms quite likely; bees will be likely to desert in a body from a lot of reeking starved and dead broods. The late limes, brambles, clover, etc., are now in fine trim if weather be favourable; heather should now be in A1 form.

Old Hermitage Gathering.—The weather properly spoiled this. I had expected to see a report in "B.B.J." last week, but no. I imagine it would have taken a very clever reporter to do ample justice. I was unable to arrive there before 3 p.m. (bees have very little regard for calendars, human appointments, or weather at times), so I lost the arrival of the many visitors, luncheon gathering, and many good things to be seen. Oh, what a mess of things a few clouds and downpours of rain can make! When I did arrive among so many there assembled, I came across only three or four people I knew, yet probably most were desirable people to become acquainted with. Not previously being acquainted with host and hostess, I don't know if I even saw them. Oh, what a mess weather can make! I felt such a fool where I ought to be in the midst of friends; doubtless many others had a similar experience, but I had the great joy, through the aid of Miss Sillar, to discover our acting editor, with whom I had a pleasant half-hour at least. May other readers have the pleasure of meeting that genial person at some time or other.

I wonder if anywhere in the country there is another that has spent so much money, thought, and energy as it is very evident Mr. and Mrs. Anderson have in the hope of developing the capabilities of the country. Poultry I shelved many years ago, apparently before I knew very much about them, so am incompetent to other than much admire what I saw. Building developments and laying out (having previously known the place) are much to be admired. The bee department is to my mind the most complete it has been my pleasure to see. No expense seems to have been spared. May the owner not be disappointed, if not a success.

A. J. Ridley.

Horney Common,
Uckfield, Sussex.
July 17, 1922.

A Picnic in the Sussex Highlands.

On July 8 between 400 and 500 people from all over Kent, Surrey and Sussex, under the auspices of the Bee-keeping Associations of these three counties, and also including quite a few from Middlesex, met socially at the Old Hermitage Farms, Buxted, at the invitation of Mrs. Ismene M. Anderson, the owner. The gathering proved a great success. The estate is most delightfully situated in charming country with extensive views. The apiaries proved interesting, especially the honey room, with its display of honey and appliances, and the hive room for sterilising the hives by immersion and boiling, also the observatory hives. The aluminium comb trials and the trials of the larger frames were also inspected.

Hiving a swarm demonstration was given by Mr. Overton, of Crawley, and lectures on the lawn, with the picturesque rocks as a background, were given by Dr. Lord, of Orpington, and Mr. Judge, of Dartford. Mr. Dewey with his magnificent camera was just arranging a group to be photographed, but it was never taken owing to a sudden deluge of rain driving all to take shelter.

Groups under guides were escorted round the poultry and waterfowl departments and others wandered about the grounds inspecting the caves, Wishing Well, Hermit's Grave, Lovers' Walk, and so on, or sitting in

the various resting houses open for the purpose.

The electrical devices in use in all sorts of ways, including the power house, the electric saws for preparing the wood for poultry houses, gates, and so on, the pumping, incubating, cooking, synchronised clocks, and other numerous "gadgets" interested those of a scientific turn of mind, while the wireless station appealed to all and a concert was heard therein in the evening.

A most excellent cold lunch on arrival to 300, all seated at once under cover, and later an enjoyable tea was at least an attraction, although quite a few brought their own "tommy," which they partook of in various *al fresco* corners. After the whole party had left it is reported that not a single piece of paper or rubbish or broken shrubs were to be seen anywhere, which says much after such a long string of char-a-bancs and motors of all sorts had occupied the place.

Pamphlets with map showing how to arrive from all parts at the Hermitage, also one giving what to do and see, coupled with a neat little 16-page brochure well illustrated, was supplied to every plate laid. This latter gave legends of the Hermitage and also short references to the arrangements of the farms and apiary. These booklets are free on request, and we need not refer further here to their contents.

On the flagstaff were flying two strings of International Code flags. On asking their translation we found one reading G. C. W. meant "Bees," and the other was I. O. P., which stood for "poultry."

Another interesting scheme adopted by the County Associations was that each guest was to wear a coloured ribbon, *Kent* wearing white, *Sussex* yellow and *Surrey* green. Mr. Anderson, when passing the guests into the meal enclosure, endeavoured to well mix these colours so as to encourage exchange of ideas and upset cliqueiness. In sorting them out he says he came across a batch of yellow and blue rosettes outside the county scheme. He asked what these were, and they said "Eastbourne Association." Now it seems Eastbourne have a grievance and would not join the County Association through some silly, slight misunderstanding, so they got their tickets (white) from the Kent officials. We think that this little feud may be healed after the fraternal feeling engendered at this social meeting has taken root. The party were duly separated amongst the other guests, and a most cordial letter of thanks for the great enjoyment of their nineteen delegates and their wish to come again was sent by their Secretary on arrival home.

Several Sussex candidates were examined by previous application in a bungalow on the estate, where hives and appliances were available, for their preliminary certificates. The examiners were Mr. J. Herrod-Hempsall and Mr. G. Bryden.

Mr. Judge, who started the idea of this picnic at the Wye College meet of last summer, was very active in ensuring its success, as also Mr. Kenward, of the Sussex, and the three Surrey ladies, Miss Whyte Johnson (Reigate), Mrs. Mumford (Redhill) and Miss Knowles (Thursley) were all "on their job." They have since their return written charming letters of high appreciation and asking also for another visit in smaller batches.

This style of reunion in the summer months seems much appreciated, and the habit may come to stay. It is rather a difficult matter to get places which are large enough, interesting enough, or have enough facilities for handling a crowd as to feeding and so on. Mrs. Anderson seems to have a place embracing most of these requirements, and we are living in hopes that she will allow another meeting to be arranged at her farms on similar or even better lines another year. She and her husband, as well as Miss Dagmar Sillar, who runs the apiary and poultry, seem used to handling crowds of visitors, which, of course, is not the least part in making a gathering, like this has been, a *perfect success.*

(*Communicated.*)

South Staffordshire and District Bee-Keepers' Association.

A meeting of the above Association was held at the Stafford County Agricultural Institute, Penkridge (through the kind permission of the County authorities), on Saturday July 1.

The weather was most unfavourable for an outdoor meeting, it was dull, cold and rained, yet 24 bee enthusiasts were present.

Mr. Jos. Price, county expert and lecturer, showed the party round the apiary between the showers, explained the working of the apiary, and opened several of the hives.

Tea was provided and served by the matron of the institute in the dining hall, afterwards the company assembled in the lecture room, to listen to a lecture by the Rev. W. H. Richardson, Wolverhampton, on "The Foundations of Success."

Mr. J. C. Rushton, Principal of the Institute, presided, welcomed the Association to the Institute, was very sorry that the weather was not more favourable for the meeting, he was very anxious that the science of agriculture in all its departments, should make progress in the county, and hoped the members of the Association would try and induce their neighbours and friends to become bee-keepers. He would like to see every garden possess its hive of bees, and every cottager and labouring man a bee-keeper; it would mean more fruit, and the nectar of the fruit trees, flowers and shrubs instead of running to waste, being gathered in the shape of honey. And instead of the country spending millions of pounds in foreign countries for this commodity, it would be producing its own, and thus increasing the wealth of the community.

Rev. W. H. Richardson, in giving his Lecture on the Foundations of Success, said: "Success is hoped for by every person taking up the pursuit of bee-keeping, whether as a hobby, or as a commercial proposition; it is perfectly legitimate to look for profit, but there are profits other than currency

notes or coins of the realm. The fascination of the mysterious little toilers, the love they call forth, the absorbing interest they arouse, and the nobilities to which they lead human nature.

When speaking of success, however, we must take the broadest view of the term, and have no reservations in saying, first that *Knowledge* is a pre-requisite of success. Ignorance sooner or later ends in disappointment and disaster. This is true in any field you enter, but particularly so in the realms of apiculture. What I am appealing for is, that every bee-keeper should have a thirst for knowledge. Watch the bees in the hive, outside the hive, on the flowers, at their water supply, and every source they tap for their necessities. Open the hive with wide open eyes, expect something fresh is going to happen every time, our eyes should be on bees, combs, and everything eagerly drinking in knowledge. Such an attitude will ensure a surprising wealth of first-hand information. Attend lectures whenever possible. Read and re-read safe books. There is nothing better for the beginner than Bee-Keeping Simplified and The British Bee-Keepers' Guide Book, other advanced books can follow. Use periodicals, get the "Journal," "The Record," and "The Bee World."

The next point in the foundation of success is Practice. It is good to see others manipulate, but soon as possible do your own work, don't rely on the visit of the expert or an experienced neighbouring bee-keeper to do your work. We are going to succeed best as we do things for ourselves. Knowledge gained must be applied at every opportunity.

The next point I wish to mention is appliances. Wisely chosen, appliances will not only tend in the direction of success, but will add tremendously to the pleasure of our work. In hives the W.B.C. pattern hive I place first. I should "plump" for one accommodating 12 standard frames. These will meet the requirements of the best queens. Simplicity in the apiary has untold advantages. Don't try every new invention, and don't be afraid of asking the advice of the expert in matters of appliances. Your hives must be storm proof, combined to conserve heat in winter and protect from excessive heat in summer.

The last point I wish to emphasise. The bees you keep. You may meet every other call with scrupulous care and exactness, but if the quality of the bee is wrong nothing but failure can result. Well, what are desirable qualities, and where may they be found. Disease resistance comes first, followed hard by good workers, and good morals. Italians have proved again and again the best resistants to the acarine disease, when others have gone under. Italians have pulled diseased stocks through. They make claims to our favour if we desire success.

Of course there are grades of Italians, and we should endeavour to get the best and produce the best

W. J. WALTON,
Hon. Sec.

Huntingdonshire Bee-Keepers' Association.

Members of this Association took their annual outing on June 28, their rendezvous being Steeple Gidding, the home of their president. Some twenty-four members availed themselves of a motor char-a-banc, which was run from Huntingdon for the occasion, the rest covered the distance thither awheel. The weather was fretful, and it was considered inadvisable to get among the bees, so Mr. W. Herrod-Hempsall, who came especially for the occasion, gave two very instructive addresses—one in the afternoon on "General Management of Bees," and in the evening on "Bee Diseases, Their Cause and Cure." Both addresses were instructive and very helpful, the advice given being intensely practical. Mr. Herrod-Hempsall rightly emphasised the use of division boards, especially when it was necessary to contract the broodnest for winter. As breeding time came round it was obvious that the bees could raise the temperature of a contracted nest to 98 degrees with greater ease and less consumption of food than if the whole brood chamber had to be heated. With regard to honey production, a great thing was to get queens who bred vigorous workers. The tendency of many queen-bee breeders was production of prolific queens; what we wanted were queens who would produce first-rate nectar-gatherers. Over-prolific queens filled the combs with brood ,and ultimately the hive became crowded, and swarms was the result, whereas fewer bees of working strain would result in fuller supers.

Among those present were Mr. F. Tunnington (secretary) and Mr. T. Pack (treasurer). There were about forty present in all, apologies for absence being received from Lady Margaret Proby, the Hon. Mrs. Ferguson and Miss Ferguson, the Rev. E. H. Cook and Mrs. Willis. Votes of thanks were given to Mr. Herrod-Hempsall for his helpful addresses and to the Rev. E. F. and Mrs. Hemming. *(Communicated.)*

Prices.

[10671] I should like a few words in answer to your correspondents 10651-10664 *re* cost of bee appliances. Capt. Dutchman commences with sections; the Americans rule the price of these. Occasionally our stocks during the late season get low and a little extra is charged. Only a very few use sections, and if they are in a district where good ones can be got, the price obtainable for them will be well repaid. W.B.C. metal ends I invented, and made the first tools for producing these. Our late friend W.B.C. saw their value and consented to their name. A lot of rubbish was put on the market at a silly, low price, so that I did not trouble to

compete, but still have supplied our *best* bee-keepers and am each year getting back the trade. There is a lot of risk in their manufacture, and liability to workmen is considerable. Frames, if well made, are worth the money. People are not satisfied with the flimsy articles that they used to get. Many are grooved and fitted with wedges, and if a good frame is held up and thought about no man will consider that too much is charged. Porter escapes are American, and the prices regulated by exporters. Brass cones and straw skeps are unnecessary to the progressive bee-keeper.

Forty years ago, when the movable frame hive was first introduced, two or three enthusiasts with two or three men each commenced their manufactnre, all with different-sized frames. The B.B.K.A. stepped in and standardised the frame, and at all shows offered prizes for hives at a certain price, and this practically standardised the price of hives. Many were sent to gain the prize irrespective of cost of production. This plan, of course, could not continue; many dropped out altogether. Another cause of the increased price is the middleman has stepped in, and now bee appliances are procurable in most towns, consequently that instead of all manufactured articles going to the user, they go to the dealer and a profit allowed. It does not follow that the increase of price means very much, as there is no carriage to pay and goods are procurable at home when wanted. If the bee-keeper will get good appliances, study to get big colonies just at the right time, his extra produce will more than pay for the small extra cost of outfit, and beginners must practice the advice of our late Scotch friend, Mr. Raitt, "Make haste slowly."—Wm. Meadows.

Queen for Disposal.

[10672] I am re-queening a few stocks, and have a fertile Italian hybrid queen which is too good to destroy.

I shall only be too pleased to post it to anyone gratis who can make use of the same on receipt of their address.

She is a 1921 queen, and is heading at present a strong, healthy stock of her own.

I remain, yours faithfully,

H. E. Hitchin.

15, Marlborough Road, Long Eaton, Notts.

Swarm Migrating.

[10673] Having started keeping bees about four years ago, I had a rather peculiar experience. A swarm came out of one of my hives (of which I have eight) and settled in a neighbour's garden, about one o'clock. I was successful in skepping them in a new straw sken. At four o'clock, summer time, they suddenly took flight, and were lost, no one having seen them going. This was on Saturday, May 27. On the following Sunday people walking on the mountain-side some mile and a half away saw the bees clinging to a tree, and not knowing anything about bees left them. I was not told until some days afterwards. On the following Thursday this swarm was seen to travel in the opposite direction. The people "tanging" failed to get them to settle. No more was heard until the following Tuesday. Some seven days afterwards they settled in the same spot as they went away from. Is this usual for bees to return to their former place? I should like to hear from some of the readers, as we read so much in the "B.B.J." of swarms being lost this year.

I live in a colliery district which has not a great quantity of bee fodder.

Philp Evans.

3, Stanley Road, Skewen, Neath.

Bee Shows to Come.

A nominal charge of 2s. 6d. is made for notices (not exceeding 7 lines) in this column, 10 lines charged 3s. 6d. up to 15 lines 5s., which covers cost of insertion from order till date of show. Cash should accompany orders for insertion.

August Bank Holiday.—Cambridge Mammoth Show. Open Classes. Special one bottle and one section class.—Schedules from Mr. E. C. R. Holloway, Burwell, near Cambridge.

August 3, at Uttoxeter.—Staffordshire Bee-keepers' Association, in conjunction with Staffs. Agricultural Society. Seven silver, six bronze medals, are offered, including B.B.K.A., Staffs. B.K.A., Staffs. Agricultural Society, and Uttoxeter Agricultural Society. Liberal prize money.—Schedules and Entry Forms from W. Griffiths, Solway House, Queensville, Stafford. **Entries closed.**

Monday, August 7.—Norton Ploughing Association, Sheffield. Annual Show. Three Open Classes for honey, etc. 6 jars of extracted honey (other than light), six sections of honey. Display of honey, wax, mead, etc.—Schedules and all information from Wm. Bashforth, 45, Bank Street, Sheffield.

August 7.—Melton Constable District Horticultural Show (Norfolk). Open Classes for one bottle of honey, 3 prizes; one section of honey, 3 prizes. The honey taken in lieu of entrance fees. —Send entries to A. Hamer and R. Meynell, Secretaries.

August 8.—Monmouthshire Bee-keepers' Association, in connection with Risca and Crosskeys Horticultural Societies. Five Open Classes for honey.—Schedules from A. V. Williams, School House, Pontymister, Mon., or S. J. Sullivan, 17, Exchange Road, Risca, Mon., Hon. Secs.

August 8 and 9, Abington Park, Northampton.—Northants. Bee-keepers' Association, in connection with the Municipal Horticultural Society's Flower Show. Open Class (entry free). Special prizes. 1 lb. jar of honey, 1st 20s., 2nd 12s. 6d., 3rd 7s. 6d.—Schedules from Mr. H. F. Swann, 41, St. Michael's Mount, Northampton. **Entries close July 31.**

August 10, at Madresfield, Malvern.—Annual Show of the Worcestershire B.K.A. Four Open Classes. Single 1-lb. bottle, prize 20s.—Schedules from G. Richings, 100, Northwick Road, Worcester. **Entries close August 5.**

August 10.—Bridgnorth and District Bee-keepers' Association, in connection with Bridgnorth Agricultural Show.—J. S. Lawton, Secretary, 14, Innage Road, Bridgnorth. **Entries close August 5.**

August 19.—Carmarthen and District Allotment and Horticultural Association. Honey: 14 Classes (7 Open) and three Medals (Apis Club Silver Medal, the B.B.K.A. Silver and Bronze Medals).—Further particulars and Schedules of Hon. Secretary, Harry Tew, 21, Priory Street, Carmarthen. **Entries close August 15.**

August 19, at Carmarthen.—Carmarthenshire B.K.A. Show. Good Classes of Honey, Wax, etc. Members' and Open Classes. Valuable prizes, including the Apis Club Silver Medal and the

B.B.K.A. Silver and Bronze Medals. **Entries close August 12.** Schedules from H. Tew, Priory Street, Carmarthen.

August 19 and 21, Cannock Show.—Sixteen Classes for Honey (nine Open). Good Prizes. Schedules from Jno. Bird, Secretary, Stafford Road, Cannock, Staffs.

August 23, at Prestbury.—In connection with Prestbury Horticultural Show. Open class for 1-lb. jar. Prizes, 10s. 6d., 7s. 6d., 5s. (entry free).—Schedules from A. H. Bowen, Coronation Road, Cheltenham. **Entries close August 16.**

August 23, at Bartley Cross.—New Forest B.K.A., in connection with the New Forest Agricultural and Horticultural Association. Open and Local Classes for Honey and Appliances.—Schedules from Mr. W. Cooper, Marley House, Netley Marsh, Southampton. **Entries close August 6.**

August 26, at Hinckley, in connection with the Hinckley Sweet Pea and Rose Society's Annual Show.—Open to all bee-keepers. First prize, 12s. 6d.; second price, 7s. 6d.; and third prize, 4s.—Schedules are ready, and may be obtained by sending stamped, addressed envelope to the Hon. Secretary, A. Kimball, 119, Clarendon Road, Hinckley, Leicestershire. **Entries close August 21, 1922.**

August 30, at Chester.—Cheshire B.K.A., in connection with the Cheshire Agricultural Society's Show. Open and County Classes. Good prizes. Send one jar to Gift Class for Chester Hospital.—Schedules from T. A. Beckett, Saint Werburgh Chambers, Chester.

August 31, 1922.—Winchester Domestic Live Stock Association Show. Schedule of Honey Classes Open:—Class 5, one shallow frame; Class 6, six sections of 1922 honey; Class 7, six 1-lb. screw stoppered bottles of 1922 honey; Class 8, trophy of bee products to be arranged on table space 5 ft. by 3 ft.—Entry Forms to be obtained from M. W. Castle, 69, High Street, Winchester.

September 2, Corn Exchange, Rochester.—Medway and County Bee-keepers' Association, in conjunction with the Allotment Holders' Vegetable, Fruit and Flower Show. Eleven Open Classes, including trophy, for which a silver cup is offered. Entry fee for open classes, 1s. each.—Schedules from Mr. A. R. Castle, Y.M.C.A., Maidstone Road, Rochester. **Entries close August 19.**

September 2.—Peterborough, Oundle and District Bee-keepers' Association. Show of honey, Co-operative Hall, Peterborough. Members and Open Classes. Open (entry fee 2s.), 12 bottles Extracted Light Honey, first prize, £1 10s.; second, £1; third, 10s. Gift Class (entry free). Bottle Extracted Honey to be sold for N.U.R. Orphan Fund. First prize, W.B.C. hive; second, Appliances 15s.; third, 7s. 6d.—Schedules and Entry Forms, G. H. Seamer, Hon. Sec., Waterloo Road, Peterborough. **Closing date, August 19, 1922.**

September 2.—Middlesex Bee-keepers' Association, in conjunction with the Fête in aid of Hospital. Show of Honey, Wax and Appliances. Open Classes for shallow frames, sections, and extracted honey.—Schedules and Entry Forms from Mrs. Hodson, Harley Lodge, Private Road, Enfield.

September 9.—Middlesex Bee-keepers' Association, in conjunction with the Brentford Allotments Association Annual Show, at the Wesleyan School Hall, Clifden Road, Brentford. Twelve Open Classes for Honey, Wax, etc.—Schedules and Entry Forms from R. R. Babbage, 33, Whitestile Road, Brentford, Middlesex.

September 16 to 22.—British Bee-keepers' Association Annual Show at Grocers' Exhibition, Royal Agricultural Hall, Islington, London.—Schedules from Hon. Secretary, B.B.K.A., 23, Bedford Street, Strand, London, W.C.2. Entries close certain September 4.

September 27. — Altrincham Agricultural Society. Largest one-day show. Several Classes for honey, etc., both open and local. Good prizes. Send one jar for Gift Class, to be given to Hospital.—Schedules from H. Turner, 1, Market Place, Altrincham.

October 12, at Ongar, in connection with the Ongar and District Agricultural Association.—Extracted and Comb Honey. Open to Essex.—Schednles from G. A. Taylor, Hon. Sec., Ongar and District Bee-keepers' Association, Ashcroft, Ongar.

Special Prepaid Advertisements.

One Penny per Word.

Trade *advertisements of Bees, Honey, Queens, and Bee goods are not permissible at above rate, but will be inserted at* **1½d.** *per word as* "**Business**" *Announcements,* immediately under the *Private Advertisements. Advertisements of Hive-manufacturers can only be inserted at a minimum charge of 6s. per ½in., or 12s. per inch.*

PRIVATE ADVERTISEMENTS are only intended for readers having **Surplus Stock** *to dispose of.* **Driven Bees, Nuclei,** *and* **Queens that are reared or imported for sale,** *are Trade Advertisements, and can only be accepted under trade terms. A charge of 6d. extra per insertion will be made if a box number is used.*

PRIVATE ADVERTISEMENTS.

SURPLUS BEES, absolutely healthy, 1922 Queen, 6 frames, 50s.; carriage paid; box returnable.—ELLIOTT, Fredericks Road, Eccles. r.g.92

HEALTHY, prolific Stocks, Italian Hybrids, Dutch, Carniolans, 6 to 10 frames, 7s. per frame. REV. COOPER, Elers Road, Ealing. r.g.93

A BARGAIN.—One very fine Stock of Bees on 8 frames, £2 15s., or nearest offer; box returnable.—MR. CHEAPE, 4, Horton Crescent, Rugby. g.94

TWO good June Swarms, one English and one Dutch, the two £2 10s., or nearest offer; box returnable.—MISS CHEAPE, St Andrews, Fife. g.95

6-FRAME STOCKS strong, healthy Bees, 35s., carriage paid. H. J., 58, Ereonwald Street, Hammersmith, W.12. g.96

STRONG, healthy Stock, Italian Hybrids, on 10 frames, super 10 shallow frames, foundation partly drawn, excluder, in W.B.C. hive, also four brood frames with foundation, bargain, £5 5s.—GRIFFIN, 149, Friern Road, East Dulwich. g.97

SURPLUS 10-framed Stocks of Italian Hybrids for Sale, 70s.; 10s. on travelling box, returnable.—J. ELLIS, Laurel Bank, Swallow Street, Iver, Bucks. g.98

SECTIONS wanted. Good price for best quality. —SMITH & CO., Cambridge Street, Hyde Park, W.2. r.g.99

FOR SALE, as a going concern, Poultry and Bee Farm (50 Stocks) in Cheshire.—Apply, Box 87, BRITISH BEE JOURNAL Office, 23, Bedford Street, Strand, W.C.2. g.100

ITALIANS, strong Stocks, 1922 tested Penna Queens, 6 frames, 50s.; 8 frames, 60s.; carriage paid; returnable box, 10s. Overstocked.—ASTBURY, West Farleigh, Wylde Green, Birmingham. r.g.101

SALE, Geared Extractor, 22s.—TAYLOR, 137, Keldgate, Beverley. g.102

BEST OFFER accepted for two healthy Italian Stocks, 1922 Queens, in good hives; also super, sections, foundation, etc.—ENTWISTLE, 39, Mount Street, Swinton, Lancs. g.103

IF YOU WANT early spring flowers for your bees get Wallflower Plants, 1s. 3d. 100, 5s. 500, carriage paid. T. TARPLEE, 43, Briar Close, Evesham. r.g.104

10-FRAME vigorous Stock, Buckfast Queen, £3 5s.; box 12s., returnable.—MEAD, 27, Godson Road, Croydon. g.106

FOR SALE, eight Stocks of Bees in good Hives; must be sold; owner leaving.—GEORGE HOPPER, Kidlington, Oxon. g.121

WANTED, some Sections, well filled and capped, this season's. Reply to O'NEILL, Eaton Bishop, Hereford. g.122

TWO W.B.C. PATTERN HIVES with two supers, unpainted, unused, 27s. 6d.; also three strong 8-frame Stocks, £3; complete with 14-frame Hives, lifts, etc., £4 5s. each; guaranteed clean, healthy; young Queens.—GILBERT STONE, Chelsea Road, Easton, Bristol. g.119

WANTED, Honey Extractor, in good condition —TUCKER, 113, Chine, Grange Park, N.21. g.131

NATURAL SWARMS, 1922 Queens, prolific strains, workers, £1. — NORTH, Notley, Witham, Essex. g.120

LIGHT LEICESTERSHIRE HONEY.—28-lb. tins, £7 cwt., tins free, f.o.r.; sample 4d.—ERNEST HULL, Bee-keeper, Barrow-on-Soar, Leicestershire. g.215

SURPLUS STOCKS.—Healthy Bees for Sale.—JEWITT, Hensall, Whitley Bridge, Yorks. f.139

BEES.—Two strong Stocks, guaranteed healthy, £2 10s. each; Hives for same, £1.—WIGGINS, The Bungalow, Norton Road, Wembley.

BEES.—Surplus Hive for Sale, containing Swarm, 1922 good fertile Queen, bees covering 10 frames, brood, Italian Hybrids, £5.—FRESHWATER, 116, Hampton Road, Twickenham, Middlesex. r.g.84

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THE WISE BEE-KEEPER looks for quality. The South Hampshire Apiaries breed only from the very best strains. Result: Quality and satisfaction. Beginners' Outfits from £5.—All communications, H. E. NEWTON, New Milton, Hants.

HONEY BOTTLES.—One gross, 29s.; 3 gross, 28s.; 6 gross, 27s., carriage paid, Dudley, London or Hull (white, tall, screw top).—H. BUNNEY, Dudley. g.34

BOTTLES, nominal 1 lb., clear glass, caps and wads, 3s. per dozen.—COBB, 33, Bevan Road, Plumstead. r.g.113

GLASS QUILTS, 16 in. square, no frames, 1s. each; three, post paid, 5s. Glass Squares for glazing sections, 4s. 6d. 100; quantities less.—SMITH, 117, Great Hampton Street, Birmingham. r.g.105

QUEENS.—A few selected 1922 Fertile Italians and Carniolans, 3s. 6d. each; also Italian Virgins, 3s. 6d. each.—ERNEST BLISS, Ranmoor, Dunstable. r.g.83

BUY strong Stocks Italians on 10 frames from £3.—MISS BARBOUR, Broxton Hall, Chester. g.123

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8-FRAME STOCK, with young Queen working in sections, no disease, also hive, £4; bees carriage paid, hive forward.—J. CLAYTON, Quay, Dartmouth, Devon. r.g.51

PURE ITALIANS, 1922 Penna imported Queens (none better), 6 frames, 40s.; 8, 45s., 10, 50s.; carriage paid 50 miles; boxes returnable (overstocked; must clear).—WADHAM, Gold Street, Cardiff. r.g.6

WANTED, small Pump for tank in greenhouse. —Price and particulars to W. HERROD-HEMPSALL, Luton, Beds. f.108

FINEST ENGLISH HONEY, quality guaranteed, in 28-lb. tins, 1s. 3d. per lb.; tins free; f.o.r.—HARVEY, Apiarist, Andover. r.g.25

STOCK of Bees, standards, 50s.; another, £3 10s.; 10-frame stock, on Commercial frames; what offers?—COBB, 33, Bevan Road, Plumstead. r.g.90

SELL.—Two small powerful Acetylene Brass Head Lamps, with separate generator, suitable light car or cycle car, £3 the set; Mills' Automatic Acetylene Generating Plant, suitable for 10-roomed house, £6; quantity of Acetylene Gas Brackets and Chandeliers, prices with particulars; all carriage forward.—HERROD-HEMPSALL, Old Bedford Road, Luton, Beds. c.77

MODEL VERTICAL STEAM ENGINE for Sale, cylinder bore 1½ in., stroke 1½ in., slide valve, height 10 in., well made; also piece of 4-in. Copper Tube, sealed both ends, suitable for boiler, 35s. the lot; carriage extra; a bargain.—Box 79a, B.B.J. Office, 23, Bedford Street, Strand, W.C.2. f.141

TORTORA QUEENS.—Address, E. TORTORA, Ozzano Emilia, Bologna, Italy. Special offer for August for no less than two Queen Bees. Special conditions to wholesalers. r.g.91

NATURAL-RAISED 1922 Fertile Queens, 5s.; Natural Swarms, 3s. 6d. per lb.—WOOLDRIDGE, Toddington, Winchcombe, Glos. g.124

FOR HEATHER.—Send 30s. for excellent 3-comb Nuclei. Makes £4 spring stock.—BOWEN. g.114

SUPERIOR TINS, ideal pattern, handles, bolted lids, 7 lbs., 10d.; 14 lbs., 1s. 2d.; 28 lbs., 1s. 9d., forward.—BOWEN. g.115

SECTION SELLING CASES, attractive patterns, dozen 2s., gross 19s., forward.—BOWEN. g.116

SLOW FEEDERS, 2s. 6d.; Medium Rapid, 2s. 6d.; Large Rapid, 3s. 6d.; postage 9d. List of Hives and Supplies free.—BOWEN, Coronation Road, Cheltenham. g.117

RE-QUEEN your stocks with Tortora Queens. It will pay you.—HULBERT, "Chalet," Warwick Road, Olton, Birmingham. r.g.107

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FOR SALE, few 4-frame Nuclei Hybrids, 30s.; Stocks in skeps, £1 10s.; carriage extra; Hives, 25s.—SOFTLY, 35, Station Road, Letchworth, Herts. g.109

PENNA QUEENS.

Address:—E. PENNA, Casella Postale 178, Bologna, Italy.

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	July.	August.	September.
One Young Pure Fertile Italian Queen	8/-	8/-	8/-

SPECIAL OFFERS, until countermanded, for queens in lots of 4 at a time: From July 1st to July 31st, **£1 4s.** Orders booked in rotation, cash with order, carriage paid, safe arrival guaranteed. Payment by cheques or British postal orders. International money orders are **not** accepted. **10%** discount to Apis Club members on my prices, **except** on "Special Offers."

GRAFTON ITALIAN FERTILE QUEENS by return post, 7s. 6d.; Virgins, 2s. 6d. Nuclei, Stocks, any strength, very moderate prices.—MASOM & HEDLEY, Grafton Regis, Stony Stratford. g.110

VIRGIN QUEENS, pure Italian or Carniolan, 2s. 9d. each, 6 for 13s., 12 for 21s.—TICKELL.

FERTILE ITALIAN QUEENS, 8s.; Hybrid, 7s. —TICKELL.

GREAT REDUCTIONS.—Stocks and Nuclei. Lists free.—JACK TICKELL, Queen Breeder, Westbourne Apiary, Cheltenham. g.111

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Pure Italian Nuclei and Stocks.
Honey, 10/- for a 7-lb. tin. Beeswax.

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BEES.—6-frame Stocks for Sale, strong profitable Dutch Hybrids, 1922 Queen, 45s., plus 10s. deposit on returnable case.—CHIVERS & SONS, LTD., Histon, Cambridge. g.126

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THE BEE WORLD

should specially appeal to you. (1) It is a *double* number, obtainable at the usual price of a single issue (10½d., post free, from "B.B.J." Office). (2) It is exceptionally rich in practical information. (3) It is profusely and attractively illustrated and well produced. (4) It contains some important scientific contributions, including an article by Mr. Stanley Hirst. (5) It is the best number ever published. Can you really afford to do without it? g.127

IMPORTED ITALIAN QUEENS, Penna or Tortora, 7s.; 10-frame Stocks 58s., 8-frame 48s. Registered Breeder under Kent Education Committee.—HENSLEY. g.128

BOTTLES! BOTTLES!! BOTTLES!!!—Pound screw-top Honeys, 1 gross 29s., 3 gross 28s., 6 gross 27s.—HENSLEY, Luton Apiary, Chatham. g.129

ENGLISH Honey in tins, carriage for 8 lbs. per cwt.; 1922 Black Queens or mismates, 2s. each; imported Italian Queens, 7s. each.—THOMAS, Bartle Cottage, Exning. g.132

ITALIAN STOCKS, 1922 Queen, on 10 frames, strong, healthy, ready for heather harvest or otherwise, immediate delivery, 2 guineas; returnable box.—SECRETARY, Pembrokeshire Bee Association, Letterston. r.g.86

4-FRAME HYBRID NUCLEI, with 1922 Penna Queens, £2 10s., carriage paid.—DOGGETT, Abbey Apiary, Beche Road, Cambridge. r.g.79

FOR SALE, Simmins' Double Conqueror Hives with section racks and supers, in very good condition, £5 each.—E. R. DEBENHAM, Bladen Apiaries, Dorchester. r.g.75

HEALTHY DRIVEN BEES, with Queen, 10s. 6d. per lot, carriage paid, commencing August 1; orders now booking in rotation; cash with order; boxes returnable.—PULLEN, Ramsbury, Hungerford. r.g.71

QUEENS, Italian, 1922, Penna's strain, fertile, 10s. 6d.; virgins, 3s. 6d.; gentle; Nuclei, 3 or 4 frames, 32s. 6d., 40s.; box 10s., returnable.—WARD, Deeside Nursery, West Kirby. r.g.74

FOR THE HEATHER.—Renowned 6-frame "Utility" Stocks at 45s., carriage paid; 10s deposit on travelling box.—LEE, the Beeman Burgess Hill, Sussex. r.g.54

IMPORTED PENNA QUEENS, return, 8s.; 3-frame Nuclei, Penna Queens, 30s.; English Queens, 8s.; Italian or English Virgins, 4s.—STONE, Chelsea Road, Easton, Bristol. r.g.56

HONEY BOTTLES.

1 lb., 1 gross, **30/-**; 3½ gross, **29/-**; 7 gross, **28/-** per gross.

COBB BROS.,
33, BEVAN ROAD, PLUMSTEAD.

STRICTLY BUSINESS.—One dozen Flavine—S. B. Powders, 1s.; a Japanned Sprayer, 6s.; the Acarine 1921 Eclipse Pad, 2s. 6d.; all post paid.—S. H. SMITH, 30, Maid's Causeway, Cambridge. g.49

PENNA STOCKS ARE BEST.—Famous 6-frame Stocks headed by young fertile imported Penna Queen, delivered immediately for 50s.; 3 frames 30s. Cleopatra Stocks at same price.—THE THAMES VALLEY BEES (Regd.), Teddington. r.f.172

FINEST ENGLISH HONEY in 28-lb. cans, 1s. 4d. lb; tins and carriage free.—PEARSON & GALE, Marlborough, Wilts. r.f.171

QUEENS.—Fertile 1922 Italian Hybrids and Carniolan-Italian by return of post, price 8s. 6d. each.—HOSEGOOD, "Beecot," Cliff End, Purley, Surrey. g.1

BEES REARED ON ALF. RYALL'S LINES keep well. Buy his advice.

"WIGHT" AND "ACARINE" DISEASES.—Prevention and removal; invaluable advice; 5s. 6d. "An eye-opener."—ALF. RYALL, 8, Ospringe Road, N.W.5. r.c.87

ITALIAN FERTILES, 7s. each; prompt delivery. —ATKINSON, Fakenham. r.f.96

SURPLUS SWARMS AND NUCLEI of very best strains in Italian, Dutch and Hybrid; low prices.—WILKES, Expert, Pelsall, Walsall. r.f.45

QUEENS by return from April till October.—PEARSON & GALE, Marlborough. w.14

JACK TICKELL.—For Queens, Stocks and Nuclei. List free. — Westbourne Apiary, Cheltenham. r.a.54

ITALIAN QUEENS by RETURN OF POST. Tested, 9s. 6d.; Untested, 7s. 6d.—PEARSON & GALE, Marlborough.

THE HEATHER HONEY FLOW
is not far off.

It is well worth your while to perfect your preparations this season by obtaining **Adminson's Semicombs** (shallows) for your supers. Will admirably withstand high-speed extracting and will save you time, labour and money. They have revolutionised the production of dense honeys, and by sheer merit have established themselves in many modern apiaries. Awarded First Prize at the Royal Show, Cambridge.

No buckling. No breakage.
No sacrifice of comb.
No fear of Wax Moth.

Obtainable from all leading appliance manufacturers and dealers in Britain and abroad.

BOOK NOW!—Choicest home-bred Carniolan Queens for 1922.—PEARSON & GALE, Marlborough. b.24

DUTCH BEES.—Send for my artistically Illustrated Catalogue outlining my method of managing bees profitably. Read my notes on Queens and Queen Rearing. Will interest the expert and amateur. Free for the asking.—WHYTE, Bee Farm, Cumbernauld Station, Dumbartonshire. r.b.32

PENNA QUEENS.—Please note precise address: ENRICO PENNA, Casella Postale, 178, Bologna, Italy. r.c.141

GORDON ROWE, 28a, Moy Road, Cardiff, requires gross lots new 1st grade Sections.

PARCHMENT CONTAINERS, stamped "Fine Lemon Curd," offered at half price to honey producers who can affix labels over the printing, 1 lb., 4s. 9d.; ¾ lb., 4s.; ½ lb., 3s. 6d.; ¼ lb., 2s. 3d. per 100. Add for carriage 1s. 6d. to each 5s. value ordered. Terms cash.

BEES wanted. Queens for Sale, 7s. 6d. each.—BEE SUPPLIES & PRODUCTS ASSOCIATION, LTD., 39B, Wandle Road, S.W.17. f.47

W. P. MEADOWS Syston, Leicester

New Hive Tool,
Two Patterns, 2/6, 3/6

FOR LATE SWARMS.

We are again able to offer delivery by return of frames fitted with wired foundation, ready for use. Per set of ten, 12/4 post free. Safe arrival guaranteed.

BURTT & SON, GLOUCESTER.

We can also offer section cases correctly glazed for exhibition purposes at 3/6 per doz., postage 1/-. Fully illustrated catalogue of appliances free on application.

THEY are mowing the Sainfoin here in the foothills. On Monday we migrate to Maure, par Seyne-les-Alpes **(4,390 feet above sea-level)** where the Sainfoin is just opening its first flowers and will be followed by sage, mountain thyme, lavender, winter savoury, alpine pasture plants and spruce honey-dew, making together a **heavy honey-flow lasting until the Autumn rains and frosts. Queens reared during a heavy, natural honey flow are Nature's best queens.** Only one other breeder on earth, (California, U.S.A.) goes to such trouble and expense in insuring choice queens for his clients: **I** deserve **your** orders; can **you** afford to order elsewhere? Only the best queens bring the big profits; and when you are satisfied, so am I: is that fair? An **American Beauty** (pure) or a Carniolan Alpine queen mated to an **American Beauty** drone—July 9/-, Aug.-Sept. 8/-. Cash with order.

SKIPWITH CANNELL **Maure, par Seyne-les-Alpes, B.A., France.**

The Bee-Keepers' Calendar.

AUGUST, 1922

3 Thursday. "Of all the meals you can buy for money,
Give me a meal of bread and honey." *Richard Le Gallienne.*

4 Friday. "Dark hills whose heath-bloom feeds no bee."
William Morris, "A Garden by the Sea."

5 Saturday. "Stray o'er the heath in all its purple bloom,
And pluck the blossom where the wild bees hum."
Crabbe, "Dream of the Condemned Felon."

6 Sunday. "With deeper peace in summer noons their hum
Fills all the drowsy air."
Whittier, "The Hive at Gettysburg."

7 Monday. "Whene'er you break into their little home
And filch their hoard, first with a water-draught
Rinse face and mouth, and smoke the bees away."
Virgil. Georgics. Book IV.

8 Tuesday. "Not a bee upon the blossom,
In the pride o' sunny noon ;
. . . . . .
Kens the pleasure, feels the rapture
That thy presence gies to me." *Burns, "Fair Eliza."*

9 Wednesday. "Their rage is boundless : when provoked they breathe
Poison into their bites, and leave their stings
Deep buried in the veins, and in the wound
Lay down their very souls." *Virgil. Georgics. Book IV.*

Shows and Showing.

August is *the* month for agricultural and horticultural shows. True, there have been a number held during the past six or eight weeks, but there is a veritable flood-tide of shows this month. The reason is not far to seek, for it is at this season that the majority of fruits and vegetables come to maturity, as well as many of our most beautiful garden flowers. August is also the holiday month, when more people are at liberty to visit such functions than at other times of the year. A glance down our "Bee Shows to Come" column shows that three-quarters of the shows advertised are held in August.

We have aforetime pointed out the advantage to the honey producer of making a good display on the show benches. There still remains much to be done in the way of educating the public not only to the advantages of using honey more freely, but more especially to the superior quality of our home-produced honey. We have also pointed out what admirable opportunities they provide to the wide-awake bee-keeper for selling honey. A stand may be secured at almost any local show either free or for a nominal fee, at which honey may be sold. The example set by some of the local branches of bee-keepers' Associations of having a stand to which their members may send their h ney for disposal might be more generally followed. At several shows we have attended in the district covered by the

Harrow and District B.K.A., the energetic officials have had a stand for the disposal of their members' honey at *retail* prices, and we understand the venture has been a success.

Those who are entering honey for competition should be careful to conform to the rules, especially as to the glazing of sections. If cases for these are bought, the order should specify they are for show, and they will then be sent with the correct space left clear of lace edging.

We notice in reports of shows already held that the cold weather has been responsible for some entries not being sent. It would be well if show committees would postpone the date for closing entries a few days wherever possible. One of the largest shows in the North of England, the Royal Lancashire, have extended the time for entries in the honey classes from July 31 to August 9, and it is hoped this will result in making larger the usual good display of honey at this show at Preston. Lectures on bee-keeping are to be given by Mr. J. N. Bold, of West Derby, who was for a number of years the very able secretary of the Lancs. Bee-keepers' Association. No doubt many of the old members will be pleased to renew their acquaintance with him. The judge of honey is Mr. F. H. Taylor, who for many years has held the office of treasurer to the Association.

A Dorset Yarn.

"To the Dorset Yarner, from a Hampshire reader."

This was inscribed in a delightful book sent me last week, the first chapters of which are full of old mythological writings, old legends which are full of interest to those who are enthusiastic in the craft. Every writer on bees has his particular way of giving out to the world the knowledge he has acquired, but this is one of the most pleasing books I have yet read. Like all writers, the ethics of parthenogenesis are as Dyieryon described, that male eggs are deposited in the large cells without the fertilising element of the sire, but all females are impregnated with stored semen of the sire. To those of us who rear all kinds of live stock it is very difficult to comprehend; yet under the microscope the female eggs have been found to have the spermatozoa, but none in the eggs in the male cells. All eggs are about the same size. This was noticed by Aristotle thousands of years ago. The writer of this book is in unison with Maerterlinck that the workers wholly rule. When they want to re-queen or swarm the male cells are built in batches. These seem to be built before any queen cells are started. Have taken out some combs lately where the whole space just above the bottom bar has had three and four lines of drone cells built; as if they had not thought of rearing drones until the foundation was full of worker brood and honey, there being only that small space at the bottom to build any drone comb. The workers seem to want the males to be strong on the wing before the young queens are developed. Many of us have noticed that in earlier lots of chickens there are a great preponderance of males, but in late broods the males are very few, as if it is Nature's way to rear the males first. Other writers tell us that workers are raised in drone cells, but the entrance had been reduced to the same size as worker cells. Here is another proof of the workers' rule.

In the race of life, when one's whole energies are centred in production, when every hour has to be pinned down to do certain duties, one feels that one has lost a lot of pleasure by not having these delightful books. One writer has it, "Pleasure follows toil." We have the pleasure of reading all these legends and tales of bees when the day's toil is over.

We have had some enthusiastic visitors this week. J. P. Gee, Esq., of Summertown Farm, Oxford, motored down just as a large swarm was having its mad gambols in the air. "Is this the Dorset Yarner?" was his query when I was covered with bees (they were so full of honey, they must soon settle somewhere, and they will rest everywhere they can then). He has 25 stocks of bees, has 50 acres of fruit, and still wants to plant more; he is planting two acres of our new raspberry this year. Here is the class of man who makes empire—50 acres of fruit, and yet extending the acres year by year. Here is Emerson's clarion call of progress: "No such thing as standing still; so soon as you cease progression retrogression begins." His land is richer than the Dorset Yarner's, his Victoria plums were larger than ours, as were his gages. He grows other berries that are productive, and which are fine food for his bees. These are fine large fruits of the blackberry family, *Rubus fruticocus*. He is going to send me some. Another distinguished visitor was Colonel Kettlewell, the New Forest Association's president. He tells me of the Hyalgya berry as a fine bee plant, and which has fine fruits. Then a member of the Bucks Association came on Wednesday when I was away on County Council business, and waited to see me till evening. On Friday A. L. Langly, of the Berkshire Association, paid me a visit. All of them speak of light harvests of honey. Then yesterday (Saturday, July 29) we met the bee-keepers of Lychett in Sir John Lee's beautiful grounds. It has been a most memorable week for the Dorset Yarner. Had arranged to get off to hear Mr. Smith, of Cambridge, who was the guest of the president of the Bournemouth Association, who had invited the whole of the members to his beautiful residence by the sea, but the one meeting did not allow me to get away.

Bees are building up very rapidly; strong swarms have built out the whole of the ten combs in one week, and they are also heavy with honey. The new honey has not the rich flavour of earlier harvests; we attribute it to

privet and sweet chestnuts. Our bees are on the heather, and to be anywhere near the farm at eventide when all are flying home it is a long loud hum continuously. One can see them all going one way. Burns writes, "As bees fly hame with lades of treasure." These are so heavy laden they drop down on the alighting board as if exhausted. Some have to rest on the grass before the final goal is reached; numbers drop in front of the board.

Many sections which looked hopeless for completion a few weeks ago have been finished off this last week, but bars and 2-lb. sections with brood base are the best for quick results. This is as it is at our farms. One big swarm had drawn out the brood combs and filled two of the 2-lb. sections in one week. There were so many bees that they had to get into the rack of 2-lb. sections to find room, and filled these with honey. This is a proof that it is good policy to place surplus racks on the top of swarms. We placed a rack of these 2-lb. sections on a July swarm; they are all filled, and have given them another brood box of combs to fill up with honey. We shall get a lot of heather in these 2-lb. sections with the brood base foundation, as they so quickly draw them out. In numbers I should think that we have reached the maximum; have never seen so many as now all the season.

Honey is selling all right this season. Buyers are coming to the farms for lots of 20 sections at one time; have had to take out the completed ones and give the others back for finish. Run honey, in bottles, is sought after, but many of our Dorset members of the craft are using jam bottles, and even jars, rather than pay the high prices. The cheapest I am offered are 30s. per gross and 26s. for ½-lb. screw-top ones. This takes so much of the profit away from the producer, we do not think it is wise to incur any needless expenditure. It sells very well in 2-lb. jam bottles if it is well cleared and a good colour, though when tied down it cannot be tasted; but the buyers take the risk, which is not very great with our Dorset honeys.

J. J. KETTLE.

Jottings from Huntingdonshire

"Beaver, that's twenty, and, goodness! there's a queen beaver over there that's fifty. I do so hope she'll speak to me, then 'twill be a hundred, and I shall be up." Strange remark this, but it happened that the other day at a garden party I was walking round with a bearded brother cleric, and since his beard had a suggestion of the sandy about it, he seemed to give the flappers considerable opportunity of piling up their numbers. Surely the silly season is upon us! Scarcely had I shaken myself free of the beaverettes, when I was asked, "Have you seen the green ray?" "Yes," I replied, "hundreds of times." My questioner seemed startled, and burst out, "Surely you haven't seen many cloudless sunsets this summer?" I had not, but I can, for the information of "B.B.J." readers, state that the green ray can be seen at any time when the sun turns west after about six o'clock should there be banking clouds about. If there be a dark cloud sufficiently large to obscure the sun drawing near old Sol, just wait until the sun's disc is obscured and at once the green ray appears. Please, young lady readers, how many do we count when we see the green ray? What is more to the point, and much more interesting to bee-keepers, is to ask the question, "Have you seen what the bees are doing?" When we see queens laying unceasingly at a time when the honey stores are being rapidly depleted, one can only conclude that they are anticipating a good spell of fine, warm weather, during which they hope to gather in ample nectar for filling up the empty storage cells and, we hope, carry up a little to the supers. In the August of 1918 more honey was stored in the middle of the month than at any time of that year. An August flow is usually rapid, and, what is more, drone-breeding is generally over, and many hives have got rid of the male element. We need not, therefore, yet despair. July has already give us twenty-five wet days; the bees are anticipating twenty-five fine ones in August. It may be recalled that in 1918 the honey flow ran well into September. Disappointing, then, as 1922 has been to bee-keepers, there is time yet to turn our sadness into gladness. If, however, one reads the bee's prognostication wrongly, and cool, showery weather obtains through the holiday month, feeding must be seriously entertained. It's many a long day since the country looked so green and fresh at the end of July as now, and the wonderful wealth of flowers is enough to gladden the eyes of man and bee.

E. F. HEMMING.

Steeple Gidding.

Week-End Bee-Keeping.

BY S. H. SMITH.

(*Continued from page* 365.)

Just why our customer wants the wings of one of the queen bees clipped is beyond me, D. B., but we must follow instructions. Personally, I clip no wings until a queen has gone through one winter. From my experience, a young queen of the current year, whose wings are clipped thus early in the season and before introduction, will surely be superseded sooner or later. It is, of course, possible that our customer has ways of circumventing this. Anyhow, it is none of our business. Let us put the queen cages in a dark place to allow the bees to regain their composure until we need them.

About those bees on the window? Here's a small tube of white oil paint and a fine camel's-hair pencil. Note, D. B., that those bees have never flown in England. We mark the hairs on the thorax of each one with a little dot of white paint. Now we open the window at top and bottom to let the bees fly; but, as you see, bees show

little resourcefulness in getting out of what might be called a trap, and we shall have to help them out by gently brushing them off the window panes. It is difficult to make any trap so simple that a bee will fly or walk out of it. There—they have flown away, and now we must shut the window to keep them out. They will mark the position of this building and the window, and after circling about for a while they will return to it.

But it is a lovely day, and all kinds of flowers are offering gifts of nectar, and the air is full of vibrations from living forms. A little later, and the sensitive bodies of those bees will tell them of the two stocks in your garden, and I hope to show you some of those marked bees again. They will have joined the bee communities, and will be perfectly at home in them.

And now for an examination of our bee stocks. What was to be just a queen cell-destroying visit has now developed into a more serious affair, as it takes knowledge and experience to form an eight-frame bee-stock. Set a high standard, D. B., and live up to it, and customers will make a beaten path to your door.

We will take the barrow, as there will be a load all right. We shall use those nicely painted floorboard stands and the roofs. Now for the smoker, the carbolic cloth, the hive tool and some quilts, and we are off.

Why I like floorboards and stands in one box-like piece, D. B., is because I don't like the winter winds to whistle under the floor-boards. The design may not look so elegant as that of the W.B.C., which supports a floorboard on legs. But in England the wintering problem is not a very serious one, and almost any hive, with or without legs, will do very well as long as it is dry and weatherproof. Here we are. We will place the stands close to the occupied hives.

Yes, it is a pleasure to see the bees working like mad. Everything looks lovely, and it is really a shame to bust open those fine stocks and to send away at least one-third of the inhabitants. But we must harden our hearts and go to it if we want to prove that bees do pay.

Let us "rest a pipe," as the hunters and woodsmen say in the primal woods. Did you ever do any hunting in the wilds, D. B.? Then you will understand how important it was to attune yourself to the conditions, and not to let any excitement send out waves of emotion to alarm the game. It may sound like hocus-pocus, but an apiary is as easily excited as any wild game. All social animals can sense impulses emanating from other animals: it is the very essence of their lives to adjust themselves according to these subconscious communications. There is nothing occult or mysterious about it. Under civilisation we have largely lost this power, or, maybe, failed to inherit it. The so-called savage races possess and use it, but they look upon it as natural to all animate beings.

We shall therefore approach those bee-stocks with no feelings of covetousness or animosity. We may have to upset their domestic arrangements, but we shall do it in a spirit of helpfulness.

Excuse this preamble, D. B., but when I came into the garden bubbling over with the idea that you would meet me half-way in the jubilation I received a shock. You did not respond, and there is something on your mind. If it has nothing to do with bees, of course, we'll say no more. You have not been cutting out queen-cells or inspecting those stocks, I suppose?

"Nothing like that, old man, and if you will have it—here goes. The wife and I were talking it over, and your methods appear to us to savour a little too much of Einstein. We have been reading up on bees, and we should like to keep some on the Euclidian plane, to start with anyway. We should like to see the bees swarm, we should enjoy the excitement of seeing and hearing thousands of bees whirling around and around with the sunshine glittering on their wings and the air full of their joyous hum. All this may be too primitive for you, but there it is, Week-End, dear boy."

"I can readily see how bees run on your intensive methods may pay big, but where is the fun? This 'swarming in the hive,' as you call it, leaves me cold. There is that old saying about 'a swarm of bees in May is worth a load of hay,' etc. I want the visible evidence of the phenomenon."

I'm afraid I groaned. "Just what do you propose to do to satisfy this longing for the primitive, D. B.?" I asked.

(*To be continued.*)

British Bee-Keepers' Association.

The monthly meeting of the Council was held at 23, Bedford Street, Strand, London, W.C.2, on Thursday, July 20, 1922.

Mr. W. F. Reid presided, and there were also present Mrs. M. K. Hodson, Misses M. D. Sillar and M. Whyte-Johnstone, Messrs. G. Bryden, G. R. Alder, W. H. Simms, G. J. Flashman, J. B. Lamb, and F. W. Watts, Association Representatives, R. R. Babbage (Middlesex), Rev. E. J. Bartleet (Gloucester), C. M. G. Winn (Essex), E. G. Waldock (Surrey), and F. L. G. Watts (Herts).

The minutes of the previous meeting were read and confirmed.

In the unavoidable absence of the Hon. Sec., and the Assistant Hon. Sec., Mr. W. H. Simms, kindly undertook the secretarial work.

Letters of regret at inability to attend were read from Sir Ernest Spencer, Messrs. C. L. M. Eales, J. Herrod-Hempsall, and the Hon. Sec.

Mr. T. R. Blumer was elected a member, and the New Forest Association nominated a delegate on the Council, who was accepted.

The report of the Finance Committee was presented. Receipts for June were £41.

Payments amounting to £8 6s. were recommended. The bank balance on July 1 was £90 4s. 4d.

Reports on Preliminary Examinations at Thornton, Preston Hall, Barnet, and Lincoln were presented, and it was agreed to grant certificates to Misses M. O'Toole, M. Ayton, C. Anderson, G. Baxter, E. Ward, M. Borgia, M. Marsh, Messrs. R. W. Frow, J. H. Binner, W. J. Wilson, J. J. Baldwin, F. J. Allman, A. Brook, J. Risley, C. Hamer, J. Jell, R. V. Dennington, J. Saggers, A. C. McDonald, V. T. Rumsey, W. H. Boulter, J. Marchant, A. R. J. Short, T. B. Caldwill, H. P. Lofts, J. A. Cook, E. J. Willis, C. E. Gowar, C. A. Hambridge, A. Castle, W. H. Cook, A. R. Castle, and Capt. A. Leach.

Arrangements were made for the conversazione on September 21. Messrs. A. Richards, R. R. Babbage, and the Hon. Sec. were elected a sub-committee for the arrangements, with power to act. Lectures, tea, and entertainment to be arranged.

Mr. Waldock gave notice that at the next meeting he would move "That each County Association be requested to adopt a numbered label for use by its members, and marked 'English Honey.'"

Rev. E. J. Bartleet to refer at the next meeting to the inconvenience of May for the Final Examination.

Cheshire Bee-Keepers' Association.

STOCKPORT AND BRAMHALL DISTRICT.

Everything conspired to make the open-air meeting of the Stockport and Bramhall members of the C.B.K.A. a great success. The gathering was arranged to hear a lecture by A. M. Sturges, Esq., of Hartford, on "Acarine Disease."

The number present about 70; the perfect day; the hospitality of Capt. T. C. Neville, who generously opened Bramhall Hall grounds for the occasion; the glorious Elizabethan black and white timbered hall; its noble situation; the perfectly-kept lawns and charming gardens, flowers, fruit, vegetables and bees; the most interesting and instructive lecture; the energy and capabilities of the local secretary, Mr. W. Bradburn, who had enlisted the services of the Girl Guides and the Boy Scouts; and the excellent tea and cakes provided by the ladies, all combined to make the afternoon a feast of enjoyment.

The chair was taken by Mr. Stokoe, of Romiley, assistant secretary to the C.B.K.A., who pointed out that the pleasure of meeting other bee-keepers and their friends in such beautiful surroundings was one of the benefits derived from the Association membership, and that they had the opportunity of hearing at first-hand an account of some of the work and the results of that work by an eminent queen rearer, who was also an independent and accurate investigator of acarine disease.

Mr. Sturges' lecture was a model of lucidity and interest. He traced the life history of *Tarsonemus woodi*, showing that it invades the tracheal passages of the bee generally when the bee is about 35 days old, so that the remedy he suggested of keeping the average age of the bee low through the use of none but the most prolific young queens gives the best possible chance of prevention and elimination of the disease. An interesting discussion followed, after which Capt. Neville, the lecturer, and chairman were warmly thanked for their various contributions to the afternoon's enjoyment.

A pleasant surprise was the announcement that the ladies of the district had provided tea, after which the head gardener, Mr. Barnes, conducted the party through the superb gardens, and Mr. Bradburn displayed the bees. They are in Masheath hives, and the 16 x 10 frames, section racks and supers were busily occupied.

The hearty thanks of the meeting are due to Mr. Bradburn, its organiser, and to the ladies who provided the tea, Mrs. Barker, Mrs. Beech, Mrs. W. Bradburn, Miss Groves, Mrs. Howarth, Mrs. Shephard, and Mrs. Stretch, and room must be found for a word of praise for the Girl Guides, under Miss Lee Wood, and the Boy Scouts, under Mr. Brentnall, whose services, quietly and efficiently performed, added much to the comfort of all present.

It was pleasant to hear that the Girl Guides are taking up bee-keeping, and as Mrs. Young has presented them with a swarm and Mr. Bradburn has furnished the combs, a good start is ensured.

A Practical Bee Lecture Demonstration by Mr. E. W. Franklin will be given at Bramhall Show on Saturday, September 2, and one by Mr. Stokoe at Marple Show on August 19.—(*Communicated.*)

Monmouth Bee-Keepers' Association.

A delightful spot was selected for the summer meeting of the Monmouthshire Bee-keepers' Association on Saturday, July 15. Through the courtesy of Captain L. T. Davies, the gathering was held in the grounds of "Wye Vale," his residence, charmingly situated high up on the hillside overlooking the river at Symonds Yat.

There was an excellent attendance of some 70 or 80, the majority members of the Monmouthshire Association. Visitors were, however, present in fair numbers, including members of the Herefordshire, Worcestershire and Gloucestershire Beekeepers' Association.

It was decided to affiliate to the Apis Club, and a most interesting lecture on "Profitable Manipulation in the Apiary" was given by Dr. A. Z. Abushady, of Benson, Oxon., editor of "The Bee World."

During a short meeting of the Monmouthshire members the Hon. Secretary extended a hearty welcome to Dr. Abushady, and said he was sure everyone was delighted that he was paying them a visit.

Dr. Strong brought forward a motion which he said he had proposed on three previous occasions, but which had each time met with defeat. Now, however, he thought that

as Dr. Abushâdy was present he would perhaps back him up in what he urged. His motion was that the Association become affiliated to the Apis Club. They were already affiliated to the British Beekeepers' Association. The Apis Club was doing tremendous work in the country for beekeeping, and the affiliation fee was very small, and one which he believed even the Treasurer would admit they were able to bear!

The Hon. Secretary seconded the motion.

Dr. Abushâdy then explained the advantages of affiliation to the Club, which were, principally, the advantages to be derived from co-operation.

It was afterwards decided unanimously to affiliate to the Apis Club.

Dr. Abushâdy later addressed the whole gathering on "Some profitable bee manipulations in the apiary." Recently, he said, a prominent bee-keeper gave it as his best advice that one should leave bees entirely alone. He need hardly say that for this remark he was received with rapturous applause! That was in a very important bee-keeping district, under the instruction of a leading teacher in bee-keeping, and he had found, through the large number of letters he had received, that that advice had had a great deal of influence. He wished to submit, however, that the basis of modern bee-keeping was judicious manipulation, methodical or scientific control of bee-work. They selected their race of bees; they selected their hives; and they selected the containers in which they wanted the honey to be deposited by the bees. To leave the bees alone after that was, of course, altogether illogical. They could not do it. It logically followed that they must also exercise throughout bee management their rights of firm persuasion and supervision. It would be futile to dogmatise with Nature—or the law of orderly existence—for anything which was incompatible with such a law was bound to fail.

Proceeding, Dr. Abushâdy pointed out that rational manipulation was one thing and obstructive interference quite another. Rational manipulation was a subject upon which they could never finish educating themselves; obstructive interference was merely too much manipulation. The latter, in the hands of an ignorant bee-keeper, might lead to many disasters. It might lead to chilling the brood, spreading diseases, misguiding the bees in wax-building, balling the queen, or spoiling the honey crop. On the other hand, rational manipulation, in the hands of any thinking bee-keeper with a minimum of working experience, should lead to the control of disease, and obtaining the maximum possible honey crop.

Having enlarged upon the foregoing observations, Dr. Abushâdy went on to deal with some profitable manipulations, speaking first of all in reference to the most important factor in beekeeping—the queen bee. He devoted much attention to the consideration of the importance of assisting a temporarily failing queen, giving combs of emerging brood; to that of weekly manipulation and that of requeening. He thoroughly recommended weekly manipulation, by which it was possible absolutely to control swarming, at any rate so far as it was humanly possible; while he warned them that by leaving it a fortnight they ran big risks. Another class of important manipulation in the apiary was the control of diseases. A very useful manipulation was to carry out artificial swarming and to destroy the artificial swarm, by which, while losing the honey stock, they would save the rest of the apiary. The third group of manipulation with which Dr. Abushâdy dealt was in relation to direct honey production, and in this connection he successively spoke of the advantages of the Demaree principle, the brood-hatching chamber, and brood alternation. Afterwards the doctor invited questions, and cleared up a number of interesting points upon which some of his audience had doubts.

The company then sat down to tea, some at "Wye Vale," and others at a neighbouring hotel. Later on Dr. Abushâdy gave some interesting demonstrations in the apiary, which is the joint property of Captain Davies and the Hon. Secretary, Mr. T. Tyler Taylor, of queen introduction. He was warmly thanked for his address and demonstrations, and a most enjoyable and successful meeting came to a conclusion.

Warwickshire Bee-Keepers' Association.

A successful show, arranged by this Association, was held in connection with the County Agricultural Society's Show at Nuneaton on July 19 and 20. This, together with the demonstrations given in the Bee Tent, attracted a great many visitors. Some excellent extracted honey was staged in both the open and members' classes, but the display of comb honey was rather disappointing. Owing to the cold weather prevailing during the five weeks previous to the show much that was entered in prospect could not be produced.

Mr. Joseph Price, of Stafford, judged the exhibits, and his awards gave general satisfaction. Mr. Price also conducted the examination of three candidates for the Preliminary Certificate of the B.B.K.A.

The prizes were awarded as follows :—

Class 1.—Collection of hives and appliances: 1st, G. Franklin.

Class 2.—Bees in observatory hives: 1st, E. Allcock; 2nd, H. W. Edwards; 3rd, C. W. Dutton.

Class 3.—Most attractive display of honey: No entry.

Class 4.—Six 1-lb. sections: 1st, H. W. Edwards; 2nd, A. E. Warren.

Class 5.—Six 1-lb. jars light-coloured honey: 1st, A. H. Bowen; 2nd, A. E. Warren; 3rd, H. W. Edwards; 4th, G. Franklin.

Class 6.—Six 1-lb. jars medium-coloured honey: 1st, A. E. Warren; 2nd, H. W. Edwards; 3rd, H. G. Hughes.

Class 7.—One 1-lb. section: 2nd, T. A. Dennison.

Class 8.—One 1-lb. jar: 1st, A. H. Bowen; 2nd, J. Bailiss; 3rd, E. Allcock; 4th, T. A. Dennison.

Class 9 (members).—Six 1-lb. sections: 2nd, W. H. Edwards; 3rd, E. Allcock.

Class 10 (members).—Six 1-lb. jars light-coloured honey: 1st, W. H. Edwards; 2nd, W. Kennard; 3rd, E. Allcock; 4th, E. Franklin.

Class 11 (members).—Six 1-lb. jars medium-coloured honey: 1st, W. H. Edwards; 2nd, E. Allcock; 3rd, F. W. Allinson.

Class 12 (members).—Three 1-lb. sections and three 1-lb. jars; 3rd, W. Kennard.

Class 13.—Beeswax: 1st, W. H. Edwards; 2nd, G. Franklin; 3rd, E. Allcock.

Several members of the committee of the W.B.K.A., with the Secretary and the Expert, attended the show of the Birmingham Horticultural Society in Handsworth Park on July 21 and 22, and gave short lectures and demonstrations, in which great interest was manifested by the crowds of visitors.

(*Communicated.*)

Hale and District Allotment Association Honey Show.

A very interesting display of honey and wax was staged at the second annual show of the Hale Allotment Association. The quality of the exhibits was very high, and in the wax section I have never seen better; this despite the fact that 3 lbs. had to be staged. Unfortunately, the weather was horrible, which caused many to stay away, but the honey section was crowded during the whole afternoon.

In the evening a very interesting lecture on bee-keeping was given by Mr. Gregory, of Mill Hill, on "The Hive and its Mysteries." A large crowd listened attentively, and several present expressed a desire to take up bee-keeping.

G. James Flashman.

Newcastle and District Bee-Keepers' Association.

The monthly meeting of the above was held on Saturday, July 22, and a good gathering of members sat down to tea, provided by Mr. Davidson, in the drawing-room of the Bensham Grove Settlement. The day being warm, the kindly thought of Mr. Davidson to provide refreshment was very much appreciated by the members, who had travelled a distance to attend, and a pleasant half-hour was enjoyed over the teacups exchanging experiences.

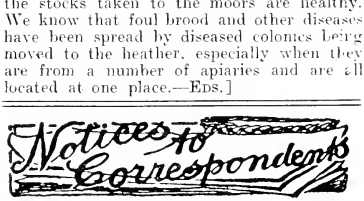
The question of transport to the moors was discussed, and it was carried that this mode of transport be used, as where the hives can be concentrated at one centre the railway company only charges 1s. 1½d. a mile per truck at company's risk, or 10½d. per mile per truck owner's risk.

Some thirty hives are to be packed for transport in this way, several members having made previous arrangements. The secretary read over to the meeting the conditions of affiliation, as applying to the B.B.K.A., and, after discussion, it was decided to apply for affiliation with that august body, but to wait over to January before doing so. Rules were then framed and adopted, and payments to the Bensham Grove Settlement for use of the rooms were agreed to, as the meeting place is ideal and centrally situated.

Mention must also be made of the short lecture given by the chairman, Mr. Richardson, on "Honey Plants," several of which he had brought to the meeting. This lecture preceded the meeting, and was listened to with interest, and several members jotted down the names of the several varieties to order them for installation in their several gardens.

J. Bouch,
Hon. Secretary.

[We trust the members will be careful that the stocks taken to the moors are healthy. We know that foul brood and other diseases have been spread by diseased colonies being moved to the heather, especially when they are from a number of apiaries and are all located at one place.—Eds.]



A. A. (Rutland).—*Transferring bees from box.*—It is getting too late in the year to transfer the bees in the usual way. If the combs in the box are straight, you might drive the bees, then cut out the comb and tie it into standard frames, place these in the new hive, and run the bees back on to them. The frames should be *filled* with comb, using large pieces first, and filling up all spaces with smaller pieces, and making all secure by tying three or four pieces of string round the frames from top to bottom.

T. S. (Drayton).—*Identification of insect.*—We cannot say what the insect was, as it was too damaged. So far as we could see, it was too large for a wax moth.

C. B. (Beds.).—*Swarm decamping.*—We do not know why the bees deserted the hive and brood. Bees do many things that cannot be accounted for. The spray you sent was heather—the common ling, which yields the well-known heather honey.

T. W. P. (Aylsham).—*Dead queen in front of hive.*—Probably there were two queens with the cast, and as this was placed behind another hive, one queen flew and in returning attempted to enter the wrong hive.

W. J. W. (London, N.).—*Bees swarming and no queen cells.*—If queen cells are continually cut out bees will sometimes swarm if there are none in the hive, but there are eggs and young larvæ left from which the bees can rear a queen. As a preventive of stings try a few drops of oil of wintergreen rubbed on the hands, or mix about 10 drops of oil of pennyroyal in ½ oz. of olive oil and rub a few drops on the hands.

Bee Shows to Come.

August Bank Holiday.—Cambridge Mammoth Show. Open Classes. Special one bottle and one section class.—Schedules from Mr. E. C. R. Holloway, Burwell, near Cambridge.

Monday, August 7.—Norton Ploughing Association, Sheffield. Annual Show. Three Open Classes for honey, etc. 6 jars of extracted honey (other than light), six sections of honey. Display of honey, wax, mead, etc.—Schedules and all information from Wm. Bashforth, 45, Bank Street, Sheffield.

August 7.—Melton Constable District Horticultural Show (Norfolk). Open Classes for one bottle of honey, 3 prizes; one section of honey, 3 prizes. The honey taken in lieu of entrance fees. —Send entries to A. Hamer and R. Meynell, Secretaries.

August 8.—Monmouthshire Bee-keepers' Association, in connection with Risca and Crosskeys Horticultural Societies. Five Open Classes for honey.—Schedules from A. V. Williams, School House, Pontymister, Mon., or S. J. Sullivan, 17, Exchange Road, Risca, Mon., Hon. Secs.

August 8 and 9, Abington Park, Northampton.—Northants. Bee-keepers' Association, in connection with the Municipal Horticultural Society's Flower Show. Open Class (entry free). Special prizes. 1 lb. jar of honey, 1st 20s., 2nd 12s. 6d., 3rd 7s. 6d.—Schedules from Mr. H. F. Swann, 41, St. Michael's Mount, Northampton. **Entries closed.**

August 10, at Madresfield, Malvern.—Annual Show of the Worcestershire B.K.A. Four Open Classes. Single 1-lb. bottle, prize 20s.—Schedules from G. Richings, 100, Northwick Road, Worcester. **Entries close August 5.**

August 10.—Bridgnorth and District Bee-keepers' Association, in connection with Bridgnorth Agricultural Show.—J. S. Lawton, Secretary, 14, Innage Road, Bridgnorth. **Entries close August 5.**

August 19.—Carmarthen and District Allotment and Horticultural Association. Honey: 14 Classes (7 Open) and three Medals (Apis Club Silver Medal, the B.B.K.A. Silver and Bronze Medals).—Further particulars and Schedules of Hon. Secretary, Harry Tew, 21, Priory Street, Carmarthen. **Entries close August 15.**

August 19, at Carmarthen.—Carmarthenshire B.K.A. Show. Good Classes of Honey, Wax, etc. Members' and Open Classes. Valuable prizes, including the Apis Club Silver Medal and the B.B.K.A. Silver and Bronze Medals. **Entries close August 12.** Schedules from H. Tew, Priory Street, Carmarthen.

August 19 and 21, Cannock Show.—Sixteen Classes for Honey (nine Open). Good Prizes. Schedules from Jno. Bird, Secretary, Stafford Road, Cannock, Staffs.

August 23, at Prestbury.—In connection with Prestbury Horticultural Show. Open class for 1-lb. jar. Prizes, 10s. 6d., 7s. 6d., 5s. (entry free).—Schedules from A. H. Bowen, Coronation Road, Cheltenham. **Entries close August 16.**

August 23, at Bartley Cross.—New Forest B.K.A., in connection with the New Forest Agricultural and Horticultural Association. Open and Local Classes for Honey and Appliances.—Schedules from Mr. W. Cooper, Marley House, Netley Marsh, Southampton. **Entries close August 6.**

August 26, at Hinckley, in connection with the Hinckley Sweet Pea and Rose Society's Annual Show.—Open to all bee-keepers. First prize, 12s. 6d.; second price, 7s. 6d.; and third prize, 4s.—Schedules are ready, and may be obtained by sending stamped, addressed envelope to the Hon. Secretary, A. Kimball, 119, Clarendon Road, Hinckley, Leicestershire. **Entries close August 21, 1922.**

August 30, at Chester.—Cheshire B.K.A., in connection with the Cheshire Agricultural Society's Show. Open and County Classes. Good prizes. Send one jar as Gift Class for Chester Hospital.—Schedules from T. A. Beckett, Saint Werburgh Chambers, Chester.

August 31, 1922.—Winchester Domestic Live Stock Association Show. Schedule of Honey Classes Open:—Class 5, one shallow frame; Class 6, six sections of 1922 honey; Class 7, six 1-lb. screw stoppered bottles of 1922 honey; Class 8, trophy of bee products to be arranged on table space 3 ft. by 3 ft.—Entry Forms to be obtained from M. W. Castle, 60, High Street, Winchester.

September 2, Corn Exchange, Rochester.—Medway and County Bee-keepers' Association, in conjunction with the Allotment Holders' Vegetable, Fruit and Flower Show. Eleven Open Classes, including trophy, for which a silver cup is offered. Entry fee for open classes, 1s. each.—Schedules from Mr. A. R. Castle, Y.M.C.A., Maidstone Road, Rochester. **Entries close August 19.**

September 2.—Peterborough, Oundle and District Bee-keepers' Association. Show of honey, Co-operative Hall, Peterborough. Members and Open Classes. Open (entry fee 2s.), 12 bottles Extracted Light Honey, first prize, £1 10s.; second, £1; third, 10s. Gift Class (entry free). Bottle Extracted Honey to be sold for N.U.R. Orphan Fund. First prize, W.B.C. hive; second, Appliances 15s.; third, 7s. 6d.—Schedules and Entry Forms, G. H. Seamer, Hon. Sec., Waterloo Road, Peterborough. **Closing date, August 19, 1922.**

September 2.—Middlesex Bee-keepers' Association, in conjunction with the Fête in aid of Hospital. Show of Honey, Wax and Appliances. Open Classes for shallow frames, sections, and extracted honey.—Schedules and Entry Forms from Mrs. Hodson, Harley Lodge, Private Road, Enfield.

September 6 to 9, at Moor Park, Preston.—Royal Lancs. Show. Seven Open Classes.—Schedules (please state "Honey") from Reg. O. Bradbury, Secretary, Derby House, Preston. **Entries close August 9.**

September 9.—Middlesex Bee-keepers' Association, in conjunction with the Brentford Allotments Association Annual Show, at the Wesleyan School Hall, Clifden Road, Brentford. Twelve Open Classes for Honey, Wax, etc.—Schedules and Entry Forms from R. R. Babbage, 33, Whitestile Road, Brentford, Middlesex.

September 16 to 22.—British Bee-keepers' Association Annual Show at Grocers' Exhibition, Royal Agricultural Hall, Islington, London.—Schedules from Hon. Secretary, B.B.K.A., 23, Bedford Street, Strand, London, W.C.2. **Entries close certain September 4.**

September 27. — Altrincham Agricultural Society. Largest one-day show. Several Classes for honey, etc., both open and local. Good prizes. Send one jar for Gift Class, to be given to Hospital.—Schedules from H. Turner, 1, Market Place, Altrincham.

September 28, 29, 30.—Kent County and Western Divisional Show. Open Classes to United Kingdom (12 classes), Honey, Wax, Mead, Novelty, Scientific.—Schedules from Hon. Show Secretaries, W. E. Clifford, Southlands Road, or E. R. Seadon, Stanley Road, Bromley, Kent.

October 12, at Ongar, in connection with the Ongar and District Agricultural Association.—Extracted and Comb Honey. Open to Essex.—Schedules from G. A. Taylor, Hon. Sec., Ongar and District Bee-keepers' Association, Ashcroft, Ongar.

Special Prepaid Advertisements.

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Trade *advertisements of Bees, Honey, Queens, and Bee goods are not permissible at above rate, but will be inserted at* **1½d.** *per word as* **"Business"** *Announcements, immediately under the Private Advertisements. Advertisements of Hive-manufacturers can only be inserted at a minimum charge of 6s. per in., or 12s. per inch.*

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FINEST WELSH HONEY, in 28-lb. tins, at 1s. 3d. per lb., tins free; Fruit Honey, in 1-lb. screw caps, at 20s. per dozen; 3 lbs. at 10s. 6d. ditto; f.o.r. — SECRETARY, Bee Association, Letterston, Pem.

STRONG 10-frame Stock Hybrid Italians, 1922 Queen, 70s., carriage paid.—O. F. COOPER, Chellaston, Derby. h.2

BEES (ITALIAN).—Several good Stocks in W.B.C. Hives, made of 1-in. timber throughout and well painted; guaranteed healthy.—Apply, H.S., c/o DOVE, 18, Victoria Street, S.W.1. h.1

OVERSTOCKED.—Italian Hybrid Bees, 4-10 frames, with 1922 Queen, price from 30s.; Queens only, 7s. 6d. each. Queen mother a Simmins' Victory Queen.—WM. JACKSON, Post Office, Bleasby, Notts. h.5

EXCHANGE strong Stock of Bees on 8 frames for Gent.'s Second-hand Cycle, or £2 10s.—CHIDWICK, Hilton Cottage, Shrubs Hill, Sunningdale, Berks. h.7

FOUNDATION PRESS, brood and shallow combined, 40s.; delivered; full instructions.—HITCHIN, Marlborough Road, Long Eaton. h.9

"CENTURY" VAPOUR BATH CABINET, for rheumatism, etc., all accessories, 40s., or exchange Dutch Bees, young Queen, to value of 50s.—WATSON, Southview, Wolsingham. h.10

WANTED, Geared Honey Extractor, good condition; Standard Frames.—BRYCE, Salfords Parsonage, Horley, Surrey. h.14

FIVE HIVES OF BEES for Sale, healthy, £2 15s. each, including Hives.—W. T. ABRAHAM, 100, Cambridge Street, Aylesbury, Bucks. h.16

EXCHANGE Stock of Bees for Goslings or Runner Ducklings.—FAY, Wade, Havant. b.9

WELLS' DOUBLE HIVE, good condition, just repainted, price £4 10s.—Can be seen at 3, Exeter Street, Holloway Head, Birmingham. h.35

A SPLENDID STOCK, 10 frames, pure Italian, 57s. 6d.; Italian Hybrid, 50s.; guaranteed healthy; combs of brood well covered with bees, 5s. each; only selling through being overstocked; proved honey gatherers.—CURTIS, 1, Nimrod Road, Streatham, S.W.16. h.50

SURPLUS DUTCH AND ITALIAN STOCKS, Queens, and large late Swarms from the best honey-gathering and disease-resisting strains; all guaranteed healthy, and headed with 1922 Queens. —Particulars and price to HUDSON, Hayton Smeath, Retford, Notts. r.h.33

QUANTITY SURPLUS APPLIANCES for Sale, Hives, Section Racks, Supers, etc., new; also few Stocks of Bees, cheap. Write requirements.—STONE, Chelsea Road, Easton, Bristol. r.h.37

BEES.—Surplus Hive for Sale, containing Swarm, 1922 good fertile Queen, bees covering 10 frames, brood, Italian Hybrids, £5.—FRESHWATER, 116, Hampton Road, Twickenham, Middlesex. r.g.84

E. H. TAYLOR, LTD., WELWYN, HERTS

The Largest Bee Appliance Manufacturers in Europe.

FORTY PAGE ILLUSTRATED CATALOGUE POST FREE.

SURPLUS.—May Swarm, on frames, in strong Hive. What offers? — Sheepcotes, Southminster. h.15

SEVERAL MAY SWARMS for Sale, 25s. each, including Skeps. — ALLKINS, Fiddington, Tewkesbury. h.17

QUADRANT ROADSTER BIKE, 1912 model, good running order, £7, or nearest offer.—L. HAST, Sunny Vale, Alfriston, Sussex. r.h.18

BLACK X BEES, 10 frames, 20 Stocks, £3 each on rail; overstocked; boxes 10s. extra.—E. BLACKMORE, Halthaies, Bradninch. h.19

SURPLUS STOCKS, 1922 Italian Queens, 8 frames, 45s.; box 12s., returnable. Proceeds for Missions.—RECTOR, Watlington, King's Lynn h.36

OWNER LEAVING DISTRICT.—Seven Stocks and Nuclei, healthy Italians, in massive Hives, Extractor, Ripener, and all Appliances, as one lot.—Particulars, CAPT. BUTCHER, Glasbury, Hereford. h.21

THROUGH ILLNESS, H. Robins, of 290, Priory Road, St. Denys, Southampton, must Sell small Apiary of 12 healthy Stocks of Italian Hybrid Bees with good Hives, double walled and insulated; will winter bees in coldest weather; with sections of honey in them; buyer to move them; price £48; also good Swarm Boxes cheap. h.6

WANTED, clean, drawn-out Broods, Shallows and Sections; lowest prices. — EDWIN GLOSSOP, Ambergate h.8

FOR DISPOSAL, Taylor's Knife Warmer and two Roots' improved Uncapping Knives, new, 22s. 6d.—STAHL, Compton-Bishop, Axbridge. h.20

SURPLUS BEES, absolutely healthy, 1922 Queen, 8 frames, 50s., carriage paid; box returnable.—ELLIOTT, Fredericks Road, Beccles. r.g.92

HEALTHY, prolific Stocks, Italian Hybrids, Dutch, Carniolans, 6 to 10 frames, 7s. per frame.—REV. COOPER, Elers Road, Ealing. r.g.93

SECTIONS wanted. Good price for best quality. —SMITH & CO., Cambridge Street, Hyde Park, W.2. r.g.99

ITALIANS, strong Stocks, 1922 tested Penna Queens, 6 frames, 50s.; 8 frames, 60s.; carriage paid; returnable box, 10s. Overstocked.—ASTBURY, West Farleigh, Wylde Green, Birmingham. r.g.101

IF YOU WANT early spring flowers for your bees get Wallflower Plants, 1s. 3d. 100, 5s. 500, carriage paid.—T. TARPLEE, 48, Briar Close, Evesham. r.g.104

BEES.—Two strong Stocks, guaranteed healthy, £2 10s. each; Hives for same, £1.—WIGGINS, The Bungalow, Norton Road, Wembley. r.g.130

PURE ITALIANS, 1922 Penna imported Queens (none better), 6 frames, 40s.; 8, 45s., 10, 50s.; carriage paid 50 miles; boxes returnable (overstocked; must clear).—WADHAM, Gold Street, Cardiff. r.g.6

For best bees, queens and appliances come to PEARSON & GALE, Marlborough.

PENNA QUEENS.

Address:—E. PENNA, Casella Postale 178, Bologna, Italy.

PRICE LIST FOR 1922.

	August.	September.
One Young Pure Fertile Italian Queen	8/-	8/-

SPECIAL OFFERS, until countermanded, for queens in lots of 4 at a time: From July 1st to July 31st, **£1 4s.** Orders booked in rotation, cash with order, carriage paid, safe arrival guaranteed. Payment by cheques or British postal orders. International money orders are **not** accepted. **10%** discount to Apis Club members on my prices, **except** on "Special Offers."

WANTED, some Sections, well filled and capped; this season's.—Reply to O'NEILL, Eaton Bishop, Hereford g.122

WANTED, small Pump for tank in greenhouse. —Price and particulars to W. HERROD-HEMPSALL, Luton, Beds. f.108

FINEST ENGLISH HONEY, quality guaranteed, in 28-lb. tins, 1s. 3d. per lb.; tins free; f.o.r.—HARVEY, Apiarist, Andover. r.g.25

STOCK of Bees, standards, 50s.; another, £3 10s.; 10-frame stock, on Commercial frames; what offers?—COBB, 33, Bevan Road, Plumstead. r.g.90

SELL.—Two small powerful Acetylene Brass Head Lamps, with separate generator, suitable light car or cycle car, £3 the set; Mills' Automatic Acetylene Generating Plant, suitable for 10-roomed house, £6; quantity of Acetylene Gas Brackets and Chandeliers, prices with particulars; all carriage forward.—HERROD-HEMPSALL, Old Bedford Road, Luton, Beds. c.77

MODEL VERTICAL STEAM ENGINE for Sale, cylinder bore 1½ in., stroke 1½ in., slide valve, height 10 in., well made; also piece of 4-in. Copper Tube, sealed both ends, suitable for boiler, 35s. the lot; carriage extra; a bargain.—Box 79a, B.B.J. Office, 23, Bedford Street, Strand, W.C.2. f.141

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1½d. per word.

THE WISE BEE-KEEPER looks for quality. The South Hampshire Apiaries breed only from the very best strains. Result: Quality and satisfaction. Beginners' Outfits from £5.—All communications, H. E. NEWTON, New Milton, Hants.

DUTCH QUEENS, pure, recently mated, naturally raised, 10s. each.—A. SIMPSON, Scotsfield Apiary, Haltwhistle, Northumberland. h.3

JOB LINE.—A few dozen only. New round Tin Feeders, 1s. 10d. each; postage 9d.—HULBERT, "Châlet," Warwick Road, Olton, Birmingham. h.22

OVERSTOCKED.—Fine Italian strain, 5-frame Nuclei, 1922 Queens, 32s.; box 10s., returnable.—FROST, Sandyford, Stone, Staffs. h.11

GRAFTON ITALIAN QUEENS BY RETURN. —Fertiles, 7s. 6d.; three, 20s.; further reduction on quantities. Nuclei, 3, 4, 6 frames, 30s., 35s., 45s., carriage paid.—MASOM & HEDLEY, Grafton Regis, Stony Stratford. h.25

FINEST TINS SOLD, handles, bolted lids, 7 lbs., 10d.; 14 lbs., 1s. 2d.; 28 lbs., 1s. 9d. Low price for quantities.—BOWEN. h.26

FAMOUS COTSWOLD QUEENS, 9s. per return; bright, vigorous, prolific.—BOWEN. h.27

SAFE QUEEN INTRODUCTION.—Send 2s. 6d. for tested Cage with instructions.—BOWEN, Coronation Road, Cheltenham. h.28

IMPORTED ITALIAN QUEENS, Penna or Tortora, 6s. 6d.; few 8-frame Stocks to clear, 45s.—HENSLEY. h.29

STRICTLY BUSINESS.—The Acarine Eclipse Cartridge, to use in the smoker, at any time, per dozen, 6s., post paid; Flavine—S Bee Candy, 6 lbs., post paid, 7s.—S. H. SMITH, 30, Maid's Causeway, Cambridge. h.23

BOTTLES! BOTTLES!! BOTTLES!!!—Pound screw top, caps and wads, 1 gross, 29s.; 3 gross, 28s.; 6 gross, 27s.—HENSLEY, Luton Apiary, Chatham. h.30

SIMMINS' SILVER STAR NUCLEI, 35s.; also Lancaster ½-plate Camera, 2 double slides, £3.—WEARING, 105, Brunswick Park Road, Wednesbury. h.31

FERTILE ITALIAN QUEENS, 8s.; Hybrids, 7s. —TICKELL.

VIRGIN QUEENS, Italian or Carniolan, 2s. 9d. —JACK TICKELL, Queen Breeder, Westbourne Apiary, Cheltenham. h.32

RE-QUEEN selected Penna Queens, 8s. each, per return. Quantities or booked advance reduced prices.—GILBERT STONE, Chelsea Road, Easton, Bristol. r.h.38

NATURAL SWARMS, 1922 Queens, £1; splendid strains; workers.—NORTH, Notley, Witham, Essex. h.40

HONEY BOTTLES, 1 lb., 1 gross, 29s.; 3½ gross, 28s.; 6 gross, 27s.; free Dudley, Hull, London. —H. BUNNEY, Dudley. h.41

7/- ITALIAN QUEENS, beauties, giving magnificent colonies heavy storing bees.—ATKINSON, Fakenham. r.h.42

QUEENS.—Tested Italian Hybrids, 7s. 6d. each; 9-frame Stocks, with young Queens, £3 each; box 10s., returnable.—SMITH, 50, Lindum Avenue, Lincoln. h.4

CORNWALL BEE RE-STOCKING COMMITTEE has a few 3- and 4-frame Nuclei for Sale with young fertile Queens, 15s. and 18s. each, carriage paid; boxes charged 10s. each, returnable.—A. F. KNIGHT, Hon. Sec., Kenwyn, Truro. h.24

FOR THE HEATHER.—Good, strong, healthy Stocks on 6 and 8 standard frames, wired, at £2 and £2 10s.; 10s. on travelling box, returnable. —MAYES, Bennington, Stevenage. h.12

FOR SALE, new W.B.C. Bee Hives, complete with super and section rack, 35s.—HAYWARD, 153, Markham Road, Bournemouth. h.13

OUR ENGLISH HONEY in 28-lb. tins, £8 per cwt., carriage forward. Imported Italian Queens, 7s. each.—THOMAS, Exning, Suffolk. h.39

BEE-KEEPING.—Instruction by Correspondence Courses. Difficulties solved for beginners. Students thoroughly prepared for the British Bee-keepers' Association Examinations; (a) Preliminary, (b) Intermediate, (c) Final.—For particulars apply to PENNINGTONS, Horticultural Tutors, 254, Oxford Road, Manchester.

STRONG 4-frame Nuclei (1922 Italian Queen), 35s.; choice Queens, 7s. 6d.; returnable box 5s. —HOLLINGSWORTH, Heanor. r.h.49

ITALIAN QUEENS by RETURN OF POST. Tested, 9s. 6d.; Untested, 7s. 6d.—PEARSON & GALE, Marlborough.

BOTTLES, nominal 1 lb., clear glass, caps and wads, 3s. per dozen.—COBB, 33, Bevan Road, Plumstead. r.g.115

GLASS QUILTS, 16 in. square, no frames, 1s. each; three, post paid, 5s. Glass Squares for glazing sections, 4s. 6d. 100; quantities less.—SMITH, 117, Great Hampton Street, Birmingham. r.g.105

QUEENS.—A few selected 1922 Fertile Italians and Carniolans, 8s. 6d. each; also Italian Virgins, 3s. 6d. each.—ERNEST BLISS, Ranmoor, Dunstable. r.g.83

BUY strong Stocks Italians on 10 frames from £3.—MISS BARBOUR, Broxton Hall, Chester. g.123

TORTORA QUEENS.—Address, E. TORTORA, Ozzano Emilia, Bologna, Italy. Special offer for August for no less than two Queen Bees. Special conditions to wholesalers. r.g.91

NATURAL-RAISED 1922 Fertile Queens, 5s.; Natural Swarms, 3s. 6d. per lb.—WOOLDRIDGE, Toddington, Winchcombe, Glos. g.124

RE-QUEEN your stocks with Tortora Queens. It will pay you.—HULBERT, "Chalet," Warwick Road, Olton, Birmingham. r.g.107

ITALIAN QUEENS, home bred for white combs, 10s. 6d.; imported Penna Queens, 8s. 6d.; selected, 10s. 6d.; home-bred day-old Virgins, 4s. 6d.; six 10-frame Italian Stocks, right for heather, 60s. per stock. Send cash with order.—TATTERSALL WILLIAMS, The Apiary, Braunton, Devon. r.g.108

FOR SALE, two 4-comb Nuclei, Italians, 30s. each; carriage extra; box 10s., refunded on return.—HERROD-HEMPSALL, Apiary, Luton, Beds. g.112

DUTCH SWARMS for Sale, just imported, established in skeps.—DAVIDSON, Forest Road, Burton-on-Trent. g.118

BEES.—6-frame Stocks for Sale, strong profitable Dutch Hybrids, 1922 Queen, 45s., plus 10s. deposit on returnable case.—CHIVERS & SONS, LTD., Histon, Cambridge. g.126

4-FRAME HYBRID NUCLEI, with 1922 Penna Queens, £2 10s., carriage paid.—DOGGETT, Abbey Apiary, Beche Road, Cambridge. r.g.79

FOR SALE, Simmins' Double Conqueror Hives with section racks and supers, in very good condition, £5 each.—E. R. DEBENHAM, Bladen Apiaries, Dorchester. r.g.75

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QUEENS, Italian, 1922, Penna's strain, fertile, 10s. 6d.; virgins, 3s. 6d.; gentle; Nuclei, 3 or 4 frames, 32s. 6d., 40s.; box 10s., returnable.—WARD, Deeside Nursery, West Kirby. r.g.74

IMPORTED PENNA QUEENS, return, 8s.; 3-frame Nuclei, Penna Queens, 30s.; English Queens, 8s.; Italian or English Virgins, 4s.—STONE, Chelsea Road, Easton, Bristol. r.g.56

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HONEY BOTTLES.

1 lb., 1 gross, **30/-**; 3½ gross, **29/-**; 7 gross, **28/-** per gross.

COBB BROS.,
33, BEVAN ROAD, PLUMSTEAD.

PENNA STOCKS ARE BEST.—Famous 6-frame Stocks headed by young fertile imported Penna Queen, delivered immediately for 40s.; 3 frames 23s.; Cleopatra Stocks at same price.—THE THAMES VALLEY BEES (Regd.), Teddington. r.f.172

FOR THE HEATHER.—Renowned 6-frame "Utility" Stocks at 45s., carriage paid; 10s deposit on travelling box.—LEE, the Beeman, Burgess Hill, Sussex. r.g.54

HEALTHY DRIVEN BEES, with Queen, 10s. 6d. per lot, carriage paid, commencing August 1; orders now booking in rotation; cash with order; boxes returnable.—PULLEN, Ramsbury, Hungerford. r.g.71

BEES REARED ON ALF. RYALL'S LINES keep well. Buy his advice.

"WIGHT" AND "ACARINE" DISEASES.—Prevention and removal; invaluable advice; 5s. 6d. "An eye-opener."—ALF. RYALL, 8, Ospringe Road, N.W.5. r.c.87

QUEENS by return from April till October.—PEARSON & GALE, Marlborough. w.14

JACK TICKELL.—For Queens, Stocks and Nuclei. List free. — Westbourne Apiary, Cheltenham. r.a.54

BOOK NOW!—Choicest home-bred Carniolan Queens for 1922.—PEARSON & GALE, Marlborough. b.24

DUTCH BEES.—Send for my artistically Illustrated Catalogue outlining my method of managing bees profitably. Read my notes on Queens and Queen Rearing. Will interest the expert and amateur. Free for the asking.—WHYTE, Bee Farm, Cumbernauld Station, Dumbartonshire. r.b.32

PENNA QUEENS.—Please note precise address: ENRICO PENNA, Casella Postale, 178, Bologna, Italy. r.c.141

GORDON ROWE, 28a, Moy Road, Cardiff, requires gross lots new 1st grade Sections.

PARCHMENT CONTAINERS, stamped "Fine Lemon Curd," offered at half price to honey producers who can affix labels over the printing, 1 lb., 4s. 9d.; ½ lb., 4s.; ¼ lb., 3s. 6d.; ⅛ lb., 2s. 3d. per 100. Add for carriage 1s. 6d. to each 5s. value ordered. Terms cash.

W. P. MEADOWS SYSTON, Leicester.

New Hive Tool,
Two Patterns, 2/6, 3/6

Royal Lancashire Agricultural Society.

"PRESTON GUILD" SHOW, at Moor Park, PRESTON,

September 6th, 7th, 8th and 9th.

£20 in Prizes for HONEY. Judge—Mr. Frederick H. Taylor, Chorley. Prize Sheets (please state "Honey") from REG. O. BRADBURY, Secretary, Derby House, Preston.

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BEE STOCKS

Hardy Dutch Hybrids with Excellent Honey Records

FIVE FRAME and SIX FRAME Stocks, with 1922 Queens, are offered at the special price of 7/- per frame, plus 10/- deposit on returnable case. Terms : Cash with order.

Chivers & Sons, Ltd.,
THE ORCHARD FACTORY, HISTON, CAMBRIDGE.

CLEARANCE SALE OF NEW GOODS!

FOR IMMEDIATE DELIVERY.

30 Shallow Frame Racks .. .. **3/3** — 300 Fitted *Complete* Shallows .. .. **10/6** dozen.
30 Porter Escape Boards .. .. **3/9** — 100 Do. Standard .. .. **11/6** „
30 Section Racks, Fitted Complete .. **5/3** — 20 "B.B.J." Excluder **1/6**
Travelling Boxes, 4 Frames, **6/9**; 6, **8/3**; 60 Dummies, **8d.** **All ROBERT LEE'S Manufacture, BRAND NEW.** **CLEOPATRA** Strong Stocks, 3 Frames, **23/-** ; 6 Frames, **40/-**

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FOR LATE SWARMS.

We are again able to offer delivery by return of frames fitted with wired foundation, ready for use. Per set of ten, 12/4 post free. Safe arrival guaranteed.

BURTT & SON, GLOUCESTER.

We have a few copies of the ABC and XYZ with covers slightly discoloured to offer at 9/9, 12/- and 14/-. Subject to being unsold on receipt of order. Fully illustrated catalogue of appliances free on application.

THEY are mowing the Sainfoin here in the foothills. On Monday we migrate to Maure, par Seyne-les-Alpes **(4,390 feet above sea-level)** where the Sainfoin is just opening its first flowers and will be followed by sage, mountain thyme, lavender, winter savoury, alpine pasture plants and spruce honey-dew, making together a **heavy honey-flow lasting until the Autumn rains and frosts. Queens reared during a heavy, natural honey flow are Nature's best queens.** Only one other breeder on earth, (California, U.S.A.) goes to such trouble and expense in insuring choice queens for his clients : I deserve **your** orders ; can **you** afford to order elsewhere ? Only the best queens bring the big profits ; and when you are satisfied, so am I : is that fair ? An American Beauty (pure) or a Carniolan Alpine queen mated to an American Beauty drone—July 9/-, Aug.-Sept. 8/-. Cash with order.

SKIPWITH CANNELL **Maure, par Seyne-les-Alpes, B.A., France.**

1922. **ITALIAN QUEEN BEES.** **1922.**

August, September, October } 10/- each. "Specials" only.

S. H. SMITH, 30, MAIDS' CAUSEWAY, CAMBRIDGE.

The Bee-Keepers' Calendar.

AUGUST, 1922

10 Thursday. "Midst summer heat
The honey sweet
It gathers while it may,
In tiny drops,
And never stops
To waste its time in play." *Anon*, "*The Bee.*"

11 Friday. "On every side occurred suggestive germs
Of that—the tree, the flower—or take the fruit,—
Some rosy shape, continuing the peach
Curved beewise o'er its bough."
R. Browning, "*Pippa passes.*"

12 Saturday. "Thus like a Bee, Love gentle still doth bring
Honey to salve, where he before did sting."
Herrick, "*The Dream.*"

13 Sunday. "A land of promise flowing with the milk
And honey of delicious memories!"
Tennyson, "*The Lover's Tale.*"

14 Monday. ".....
Nothing changed but the hives of bees."

Before them under the garden wall,
Forward and back,
Went drearily singing the chore-girl small,
Draping each hive with a shred of black."
Whittier, "*Telling the Bees.*"

15 Tuesday. ".....That honeyed fly I saw was thee,
Which lighted on a water-lily's cup,
When lo! the flow'r, enamoured of my bee
Closed on him suddenly, and locked him up."
T. Hood, "*Hero and Leander.*"

16 Wednesday. "Where she—a statist prudent to confer
Upon the common weal; a warrior bold,
Radiant all over with burnished gold,
And armed with living spear for mortal fight;
A cunning forager
That spreads no waste; a social builder; one
In whom all busy offices unite
With all fine functions that afford delight—
Safe through the winter storm in quiet dwells."
Wordsworth, "*Vernal Ode.*"

Seasonable Hints.

There seems very little prospect of any immediate improvement in the weather conditions, and even if it comes it will be too late to affect the honey harvest, except in heather districts, and it will be advisable to remove supers as soon as possible. Stocks we have seen in different apiaries during the past week have had no sealed stores, and only very little newly gathered in the brood combs. In the majority of cases food is being consumed faster than it is brought in, which means, of course, that the reserves have to be used, and it is necessary for the beekeeper to come to the rescue and supply food. A letter from Messrs. Burtt & Son, of Gloucester, says that for the last few weeks they have been getting quite a number of orders for candy. This should be looked upon as an emergency ration for winter and early spring, and should not be given now. At the present time syrup should be given, if any feeding has to be done, and should be made of *white* cane sugar 10 lbs., water 7 pints, vinegar and salt 1 oz. each. Boil for a few minutes. Smaller or larger quantities may, of course, be made in the same proportion, say half or quarter the above quantities, or they may be doubled. Syrup is not only better than candy but cheaper.

A Dorset Yarn.

"Praise is well, blame is well, but affection is the final and most precious reward that any man can win."

Since yarning in the B.B.J. I have had some praise, perhaps more blame, because of the introduction of horticultural matters in a bee paper, but the last part of Mark Twain's quotation of "affection," as a "precious reward," is brought to mind by the letters this last week from Queensland, from the West Coast of Florida (with a copy of "Gleanings in Bee Culture"), visits of men as old as myself, men in the prime of life, others scarcely 20, who have come in motors and by motor cycles, some with clean-shaved faces, some "bearded like a pard," others writing of coming visits from Bristol and Farnborough. It shows that some bee-keepers read the simple yarns from Dorset. Invitations to stay with other bee-keepers are showered on the writer; they are so far apart it would be impossible to accept them, but, as Shakespeare put it, "A fellow feeling makes us wondrous kind." Most of the visitors are both bee-keepers and growers of market produce. Many of them bring business to the farm, orders from 500 to 5,000 for some of the stuff we grow. Though some "may blame," am thoroughly convinced that horticulture and bee-keeping are inseparate. He who loves his bees must also take an interest in plants from which they get their food. Each as they extend their plantations will sow largely flowers in which "bees delight." As Mr. Gee told me a few weeks back, he sowed breadths of Phacelias, a beautiful blue flower, entirely for them. These have no market value as cut flowers, but he also sows mignonette in large quantities for them. There is nothing among annuals that is so easily grown and gives bees more than does this. It blooms early, and carries on till frost destroys it; even on dull days bees are continuously working it. We grow a large flowering variety called "Macket." We have 5s. worth each year, sow it thinly in drills in April, careful hoeing and weeding twice, then the whole soil is soon covered with this sweet-scented unit of the floral kingdom. When I was a gentleman's gardener, this and heliotrope were the favourite units to plant close to the mansion, so that the perfume could be had by the owners from the open windows. They knew what was best, and our bees also know what is sweet. If man cannot "win affection" from his bees, he can prove it to them by sowing flowers which have food for them.

Our bees up to Saturday, August 6, were still drawing out brood base foundation in 2lb. sections. We unloaded surplus racks on double brood boxes, giving them an empty rack of brood base to work on, the centre ones being drawn out between Monday afternoon and Saturday; but then there are so many bees, had I not given these to them they must have swarmed. They may finish one or more of these racks, but if not they can stay on the top for the winter. Those that had swarmed have already finished surplus, only a few bees to be seen under glass covering, where the double brood boxes have crowds, and still a great heat is kept up.

Saturday was a great day for the flight of drones, some of the hives had sent out their young queens for mating. This must be the last assembly of males, the observation hive shows less and less each day, though they are building a queen cell. One can see the workers bent on making them go out; there are always some in the front each morning dead.

I have just had an order for 500 sections at 1s. 8d. each, so the demand for honey is alright. Must assume that the number of sections are not heavy in the honey districts Mr. Pinder, of Salisbury, said he had "some that were top-hole for exhibition." This last week has done wonders with ours, but they must not be left on too long, or bees will take it out when the nights get colder.—J. J. KETTLE.

Week-End Bee-Keeping

By S. H. Smith.

(*Continued from page* 376.)

"What about a big, fat basketful of bees, a skep I believe you call it? Or should we wait until good, heavy swarms are procurable? We could place it in the herbaceous garden, away from these stocks. My attack of bee fever won't upset our other plans. Please don't look so glum, and for goodness sake stop making those horrible noises."

"I was only thinking of what a lot of trouble you will precipitate upon your family, particularly upon Mrs. D. B. Bees usually swarm between 10 a.m. and 3 p.m. During five days of the week you are sitting calmly in your Government office during those hours, with your feet propped up on a desk and twiddling your thumbs. A swarming apiary is all right in its way, but it needs constant attention. Those who run them are persistent rather than prescient bee-keepers. There is a heap of difference between these types. In one case you potter about all day during the week waiting for swarms and then you climb trees to gather them in, or else you hire someone to do these things for you. In the other you only attend to one apiary on one day per week, or even only once in ten days. But if you have made up your mind there is nothing more to be said. I miscalculated the rate of your bee-keeping impulse. We will go into details later on. Let us get at our bees and prepare the new stocks."

We shall not need any smoke. The bees are too intent on working at this season, and the hives contain at this hour mostly young bees. There are, of course, always some guards on duty, and we may see a few come up through the bee spaces between the combs, but these will be easily subdued by a whiff from the carbolic cloth.

As the new stocks will occupy their stands for ten days, we shall place them close to the parent stocks. When we remove them any bees that have not returned home by that time will enter the old stocks.

We place a floorboard stand level and put a brood chamber in position. Then we remove the roof of hive No. 2 and peel off the quilt, following it with the carbolic cloth. We wait a minute or two for the odour to make itself felt. Now a good 8-frame stock should consist of at least two or three combs of emerging brood, three or four combs of eggs and larvæ, and two combs partly pollen and honey and partly eggs and larvæ. All combs should be well covered with bees. It sounds easy, but such standard shipping stocks take some getting, and that is where double brood chamber stocks score every time. Here we have three brood chambers to choose from. There will be no eggs above the excluder, of course, and we shall not need any, as our young fertile queens will soon supply these. Worker eggs are incubated for three days, the larvæ are fed another five, as you will have read in Chapter II. of the B.B.K.'s Guide Book.

We peel back the carbolic cloth and take out the first comb. Every cell on both sides is glistening with stored nectar. Only a row or two at the top are sealed. The bees have emerged, and the empty cells were promptly cleaned and polished and filled. We have to handle such combs carefully, but it is a mighty pretty sight. We will place it in another brood chamber put criss-cross on a lift set on the ground and cover it with a quilt to keep the bees quiet. It would be quite a job to get the bees off such a comb if we needed it bare of bees. They are easily brushed off sealed honey or sealed brood combs, but they resent being asked to clear off unsealed brood or unsealed honey combs.

The second comb has more sealed honey, and the rest is unsealed nectar and we put it alongside the first. Ah! here's something worth seeing: the third comb is nearly solid with sealed brood, and we put it in the new hive. Nos. 4 and 5 are about the same, only more so. There are two fine, fat queen cells on No. 6—down there hanging from the bottom edge. Beauties, I call them. It breaks my heart to think we cannot use such until this apiary grows. The very finest queens come from such supersedure cells. When you begin to read the B.B. Journal you will find Mr. Ellis, Rigg, Gretna, a most enthusiastic believer in queen bees raised from such cells, and many of us believe him to be right.

As it is, D.B., we cut them out. But we are going to utilise the psychological state of mind of the bees which induced them to draw out those fine queen cells and to lavish great care on them. I will show you how in a few minutes.

No. 7 has one queen cell—now no more. No. 8 will do to go into our new hive, but 9 and 10 are too full of nectar. We must dig deeper into brood chamber No. 2 to get what we want. We have six combs that are suitable, and we need two more.

We drop the carbolic cloth through the now empty top brood chamber on to the frames in the one underneath, then a twist or two of the hive tool prises loose the empty box.

We take out a middle comb to save time, going gently so as not to roll the bees. It is just what we want, brood in plenty and no queen cell. The next two are good specimens, and in they go. There are our eight combs covered with bees, and now we add two of the nectar-filled combs to fill up the hive. We shall do some readjusting the day before we send the stock away and subtract the two side combs. But that is a minor detail. By the time we have made up our second stock the bees in this one will be missing the queen odour and that given off from the queen cells. When such a condition prevails at this season we may introduce a queen bee without the preliminaries usually observed. I shall run her directly into the stock.

(*To be continued.*)

North Cheshire Chat.

TALKS OF MANY THINGS.

Is it true, Mr. Editor, that if one saw a swarm of bees about to settle on one's person, and ran away, one would be executed for cowardice—by the bees? I ask the question because in a recent issue of the "Children's Newspaper" (excellent publication) an account was given of an old man walking in a wood near Ash, in Surrey, when he espied a swarm of bees coming towards him. His first impulse was to run away, but he remembered his father, an old bee-keeper, telling him that if a swarm made as if to settle on him he was to stand perfectly still and let it. If he ran away he would be *stung to death*. So he stood quite still and the bees settled all over him for about 10 minutes, after which they left him and clustered in a bush. The writer of the article impresses on children that under similar circumstances they should do the same, and avoid the certainty of a painful death. But is it a certainty? For my own part under similar circumstances I should try dodging them among the bushes. Of course, if in my own or anyone else's apiary I should not mind, any more than Mr. Brown, of Loughborough, whose experience is recorded in the B.B.J. of July 20. I have never heard of anyone being stung to death by a swarm, but it does not follow that no one ever has. This was an old belief amongst the past generations of skeppists, but has it any foundation in fact? Another old belief was that if you killed the queen accompanying a swarm the other bees would sting you to death. We know that is a fallacy.

[We have never heard of bees in the act of swarming stinging anyone to death. We should say that anyone afraid of, or nervous at bees would be likely to be badly stung if a swarm settled on them—unless they were so paralysed by fright they were unable to move.—EDS.]

Prices of Appliances.—Mr. Meadows' letter is very unconvincing. As you remark, Mr. Editor, if he gave figures it would be more enlightening and convincing. We have to consider the competition of our Colonial brethren in honey production. Undoubtedly they can get hives and appliances much cheaper than we can, at least, in Canada and New Zealand. As Mr. Ellis remarks, we bee-keepers at present are over-capitalised, having to expend so much on trade fittings and plant.

It is very well for Mr. Meadows to tell beginners to "make haste slowly." In these days the would-be cottage bee-keeper has no option but to do so, and very slowly, too. If he is handy with tools, and owns them, and has some outhouse in which to work, given a pattern he may make a serviceable hive, but he has to furnish it. If he had the bees given him he would have to work the greater part of a week to earn the wherewithal to buy frames, supers, sections, foundation, etc. I remember when he could have bought a hive fitted with frames and a rack of sections for about the price that the frames, foundation and sections would cost him now. I know that they cannot be produced so cheaply now, as cost of wood and labour is more, but cannot they be produced at double the pre-war cost? I remember the time when I have bought a serviceable makeshift hive in the flat for 5s. I expect a similar one would cost 15s. now. More than that, a firm of hive makers once cut out for me a hive to my own specification: single-walled (except front and back), 9-in. body, 9-in. lift, roof and floor board, of ⅞-in. yellow deal, and put it on rail for 5s., including cost of wood.

I am not expecting them to do that much ever again, but it serves to show the vast abyss between prices then and now. [A swarm of bees could also be purchased for 2s. 6d. per lb., or 10s. a swarm, against 7s. 6d. per lb., and 25s. to 30s. a swarm now.—EDS.] If Mr. Meadows and some other appliance makers would give us some figures as to the increased cost of raw material and labour, say, in 1911 and 1922 we would be able, perhaps, to reconcile ourselves to the inevitable if they bear a reasonable relation to the cost of the finished article. As far as American goods are concerned, in many cases there appears to be too much discrepancy between the prices on either side the "herring pond." [In the latter case the rate of exchange has to be taken into consideration.—EDS.]

We always studied to get big colonies at the right time, Mr. Meadows, and our takes of honey then were as good as now. Extra cost of appliances do not tend to bigger takes of honey. So much for that.

Wet and Dry Seasons and Honey Production.—Last season was a record for drought in Cheshire. It was also a record for big takes of honey. But it does not follow that every dry year is likely to be good for honey. If this year had been as dry as last year *there would have been less honey than there has*. A dry year following an abnormally wet one is usually a good honey year, as there is sufficient reserve of moisture in the subsoil to bring most flowers to perfection, if the subsoil is of a fairly retentive nature. A dry season following a dry season would spell disaster. If the rains had not come when they did this year pastures would have burnt up before July, as there was absolutely no reserve of moisture in the subsoil. As every farmer and gardener knows, the soil was dust dry to a depth of two feet or more at the end of May this year. It was not so dry to that depth last year at the end of July, though we had no rain from May until August. This year might have been a record honey year if the temperature had averaged 10 per cent. higher. As you remark, Mr. Editor, a moderate amount of wet with a high temperature is the most reliable weather for nectar secretion. My own record year (I think it was 1906 or thereabouts) was a perfect farmers' year. Rain came just when wanted, and the temperature was genial throughout.

This Year's Crop.—As far as I am concerned, up to date I have taken about 6 lbs. I have now two stocks, one the original and the other two swarms united; I have also one

nucleus. The number of times both hives have swarmed I have lost count of. They are Dutch, and swarmed without any pretence of being overcrowded. I have supers on partly filled, and hope to get a few pounds of honey, but oh! the weather. Plenty of white clover in the fields, abundance of blackberry bloom, willow herbs galore, but no sunshine. Since the beginning of June we have scarcely had two warm days together, and no warm nights. In my experience warm nights are as essential to an honey flow as warm days. [Or more so.—EDS.] The night temperature of last month would have been no credit to October. I hear from other parts of Cheshire the honey crop at present is nil. I hope August will give enough genial days to let our bees store up their brood combs ready for winter; otherwise it will be feed! feed!! feed!!! These are somewhat lengthy notes, Mr. Editor. If too long, chop 'em.

D. J. HEMMING.

Appleton, Warrington, August 3.

Staffordshire Bee-Keepers' Association.

The 32nd annual show of the Staffordshire Bee-keepers' Association was held in conjunction with the Staffordshire Agricultural Society's Exhibition at Uttoxeter on August 3. Practically every section—agricultural, horticultural, and apicultural—showed a record entry. There was something at every turn to delight the eyes of the crowds of visitors that poured in all day. Amongst the visitors were H.H. Princess Helena Victoria, who is staying with Sir Harold Nutting, Bart., at Brocksford Hall, Doveridge.

The honey and bees were staged in a tent adjacent to the Horticultural and the County Council Education Committee tents, and the stewards, Mr. W. Griffiths, secretary of the S.B.K.A., with Messrs. E. W. H. Knight and Collis, who had the arrangements for judging and for the inquiries of interested visitors, found it quite a busy time. Mr. Jas. Pearman, of Derby, acted as judge, and his most careful work showed in the consistency of his awards, which, we believe, satisfied every exhibitor, even the losers. To the best of our knowledge, it was the cleanest show we have ever attended, and reflected credit on the County B.K.A. The bulk of the honey was this season's, and was of a very high quality throughout, making it a very hard task to decide on the winners. The awards were as follows:—

Class 1.—Four 1lb. sections of comb honey, 6 entries.—1st and silver medal of the S.B.K.A., Geo. Gripton, Bromstead; 2nd and bronze medal of the S.B.K.A., J. B. Leighton, Stafford.

Class 2.—Four 1lb. jars light-coloured honey, 13 entries.—1st and silver medal of the B.B.K.A., G. W. Buttery, Doxey, Stafford; 2nd and bronze medal of the B.B.K.A., E. Jacques, Lichfield; 3rd and certificate of the B.B.K.A., G. Gripton.

Class 3.—Four 1lb. jars, other than light-coloured honey, 8 entries.—1st and silver medal of the S.B.K.A., J. B. Leighton; 2nd and bronze medal of the S.B.K.A., E. Stanier, Lower Leigh, Stoke-on-Trent; 3rd, C. Beardmore, Cnosall; reserve, F. Jolley, 30, Meadow Street, Milton.

Class 4.—Four 1lb. jars granulated honey, 8 entries.—1st, G. Gripton; 2nd, M. Craddock, Longden Green, Rugeley; 3rd, J. B. Leighton; reserve, R. T. Challener, Southwell House, Eccleshall.

Class 5.—Shallow frame for extracting purposes, 7 entries.—1st and bronze medal of the S.B.K.A., J. B. Leighton; 2nd, E. Stanier.

Class 6.—Beeswax, 5 entries.—1st, J. B Leighton; 2nd, M. Craddock; 3rd, B. Warrender, The Stavegate, Blymhill Lawn, Shifnal; reserve, E. Stanier.

J. B. Leighton, Stafford, was awarded the silver medal of the Uttoxeter Agricultural Society for the most points in the above classes.

OPEN TO ALL COMERS.

Class 7.—Trophy of honey, etc., 1 entry.—1st prize and silver medal of the Staffs. Agricultural Society, S. T. Durose, The Gardens, Stapenhill, Burton-on-Trent.

Class 8.—Observatory hive, 3 entries.—1st prize and silver medal of the S.B.K.A., J. B. Leighton; 2nd and bronze medal of the S.B.K.A., S. T. Durose; 3rd, T. H. Dean, Eccleshall.

Class 9.—Four 1lb. sections of comb honey, 6 entries.—1st, G. Gripton; 2nd, G. Evans, Bromstead; 3rd, S. T. Durose.

Class 10.—Four jars light honey, 17 entries.—1st, G. Gripton; 2nd, J. Birkett, Blondell's Lane, Rainhill, Lancashire; 3rd, G. Evans; reserve, J. E. Swaffield, 1, Libertus Villas, Cheltenham.

Class 11.—Four 1lb. jars granulated, 10 entries.—1st, Geo. Gripton; 2nd, J. E. Swaffield; 3rd, E. Jacques; reserve, J. B. Leighton.

Class 12.—Collection of hives and appliances.—1st and certificate of merit, C. Lee and Son, Stafford.

G. Gripton was awarded the silver medal of the Uttoxeter Agricultural Society, and S. T. Durose the bronze medal for the most points in the open classes.

G

Fifeshire Bee-Keepers in Conference.

In beautiful sunshine after a morning's rain the bee-keepers of Fife foregathered in the gardens of lovely Raith on Saturday afternoon, July 29, for their annual conference.

Viscount Novar was unable to be present, but the company was honoured by a visit from the Viscountess during the afternoon.

Provost Kilgour welcomed the visitors to Kirkcaldy in a very neat and appropriate speech, intimating the unavoidable absence of Colonel Oswald, of Dunnikier.

Mr. Honeyman, of Craigmore, Cupar, president of the Fifeshire Bee-keepers' Association, then addressed the assembled company, who came from various parts of Fife, also from Dundee, Perth and Edinburgh.

Mr. Anderson, the Kirkcaldy branch president, afterwards presented six of the members of the Kirkcaldy branch with the Scottish Beemasters' Association "Beemasters'" certificate: Rev. Dr. Campbell, Mr. Alex. Purvis (hon. secretary), Mrs. Balfour Grahame (Leven), Mr. Thomas Dow (Markinch), Mr. D. MacLean, Mr. D. Landale; the last-mentioned had the unique experience of having presented to him in addition the "Expert Beemasters'" certificate and the "Honey Judge" certificate.

Mr. Thake, of the Edinburgh College of Agriculture, lecturing and demonstrating with a hive of live bees, held the wrapt attention of a large and appreciative audience. When he carried round a comb of live bees, in order that a nearer view might be obtained of the queen, it was easy to tell those who were not bee-keepers by their shrinking and timid attitude, some even moving off.

A feature of this year's Conference was an exhibition and competition in bee produce and appliances, in which the following were winners:—

Extracted Honey.—1, W. Reid, Balmullo; 2, W. Fernie; 3, J. A. Rollo, Cupar.

Comb Honey.—1, J. A. Rollo; 2, D. Pullar; 3, D. G. McDonald.

Comb Honey (6 Sections).—1, McDonald; 2, Pullar; 3, Fernie.

Extracted Honey (6 lbs. in jars).—1, John Miller; 2, Rollo; 3, Fernie.

Granulated Honey.—1, C. Hunter; 2, D. G. Hunter.

Cake of Beeswax.—1, W. Reid; 2, C. Hunter.

Standard Wood Frame, wired.—1, D. Landale, Kirkcaldy; 2, Pullar; 3, Fernie.

Best Shop Window Display.—W. Reid.

Gift Class—Comb Honey.—1, Pullar; 2, McDonald. *Extracted Honey.*—1, Rollo; 2, J. W. Esplin, Aberdour.

There was only one exhibit of appliances made by members, but those exhibited by contractors to the Scottish Bee-keepers' Association contained everything the most timid bee-keeper or the most wealthy could wish. Messrs. Steel & Brodie's exhibit was the most complete, and Messrs. Lindsay & Fenwick showed some good hives and appliances, while the American hives exhibited by Mr. Purdie attracted a good deal of attention.

(*Communicated.*)

Bournemouth and District Bee-Keepers' Association.

The members of this Association, embracing some 100 enthusiastic and energetic "apiarists," spent an enjoyable afternoon, by invitation of the President, Mr. F. J. Bell, in his grounds, "Seacote," Southbourne, on July 29.

Mr. S. H. Smith, of Cambridge, gave a most interesting and entertaining address, opening for explanatory purposes one of the host's hives, estimated to contain 120,000 active bees and 150 lb. of fresh honey. He emphasised the health food properties of "English" honey, and the quality and purity of that harvested in this salubrious neighbourhood. Many would-be bee masters are deterred by the fear of the bee sting. He showed that with careful handling the bees are amenable and tame. No veil was used, and of the 120,000 bees disturbed not one approached the delighted audience. A musical tea followed on the lawns, and warm thanks to Mr. Smith concluded a most enjoyable and successful outing.—(*Communicated.*)

Surrey Bee-Keepers' Association.

KINGSTON DIVISION.

A very successful honey exhibition, organised by the Kingston Division of the Surrey B.K.A., was held in conjunction with the annual exhibition of the Surbiton and Tolworth Horticultural Society, at the Alexandra Recreation Ground, Surbiton, on Wednesday, July 26.

Classes 1, sections, and 2, extracted honey, were for residents in Surbiton. Classes 3, sections, 4, extracted honey, and 5, shallow combs, for members of the Kingston Division. Classes 6, sections, and 7, extracted honey, were for members of the Surrey B.K.A. There were 39 entries. Although a fair number of sections were staged, there would have been many more but for the cold, wet weather of July, which was also responsible for only one shallow comb being exhibited, which was awarded the second prize. In the extracted honey classes the number of exhibits staged was much more satisfactory. Much of the honey was of a very high quality, and some of the sections were beautifully finished and well mounted, but some of the exhibitors failed to appreciate the importance of good mounting.—B. CARTER, Hon. Secretary, Public Library, Kingston-upon-Thames.

Glamorgan Bee-Keepers' Association.

THE CARDIFF AND COUNTY SHOW.

One heard that the entries in the flowers, fruits, etc., sections of the above show were going to be well ahead of last year. The cold, wet and windy July did not promise so well for the bees and honey section, but eventually it turned out to be a better show so far as entries were concerned than last year. The intermittent weather, however, had prevented the sections and shallow frames of comb honey being so numerous or of so high a standard as those shown in 1921. The Committee of the Glamorgan Bee-keepers' Association are especially grateful to Messrs. Taylor, of Welwyn, for presenting us with a hive, and also to Messrs. Burtt, Gloucester, for theirs, although it would have been an advantage if the latter had made known their offer sooner. The Apis Club medal was also highly appreciated. The prize-winners in the Points Class were Messrs. Ivor Williams, Wm. Davies, and William C. House. It was a pleasure for

the younger bee-keepers to see our veteran friends, Messrs. W. J. Wiltshire, the former secretary, and Freeman Gravil, our treasurer, who during last show was laid up. Both looked in the pink of condition.

Messrs. Wm. Dyche, B.A., and W. O. Jones, acting as judges, gave universal satisfaction. Their task was by no means light, especially in judging honey cakes, and light honey. Mr. W. O. Jones also examined candidates for the "Junior Craftsman's" certificate.

The prize-winners were :

Collection of Bee-keepers' Appliances.—Ivor Williams, Wenvoe.

Twelve 1-lb. jars Extracted Honey.—1st, Messrs. Griffiths & Aubrey, Llanelly; 2nd, W. Davies; 3rd, T. Jones, Taff's Well.

Twelve 1-lb. jars Extracted Honey (dark).—1st, Messrs. Griffiths & Aubrey; 2nd, C. B. Pardoe, a discharged and disabled Army officer from Barry; 3rd, W. Davies.

Two shallow frames of Comb Honey.—1st, Sam Lewis, Bridgend; 2nd, T. Jones, Taff's Well.

MEMBERS' CLASSES.

Six 1-lb. jars of Extracted Honey.—1st, Ivor Williams, Wenvoe; 2nd, W. C. House, Pontyclun; 3rd, Master Denys Williams, Wenvoe.

Six 1-lb. jars Extracted Honey (medium).—1st, W. C. House; 2nd, C. B. Pardoe; 3rd, W. J. Watkins, Pontyclun.

Six 1-lb. jars Extracted Honey (dark).—W. Davies, Cardiff.

Six 1-lb. jars of Granulated Honey.—1st, Master Denys Williams; 2nd, F. Graevil; 3rd, W. Davies.

Six 1-lb. Sections.—1st, Mrs. Fletcher, Margam.

Two shallow frames of Comb Honey.—2nd, W. J. Watkins, Pontyclun.

Wax (not less than 1 lb.).—1st, Wm. Davies; 2nd, T. Davies, Clydach; 3rd, Ivor Williams.

Observatory Hive, with live bees (queens, drones and workers).—1st, Ivor Williams; 2nd, C. B. Pardoe; 3rd, Master Denys Williams.

Articles of Food or Confectionery.—1st, Wm. Davies, Cardiff; 2nd, W. Morgan, Llantrisant; 3rd, W. Davies, Cardiff.

Brood and Shallow Frame, with comb foundation.—1st, Ivor Williams; 2nd, Master Denys Williams; 3rd, A. David.

Mead.—1st, W. C. House, Pontyclun; 2nd, W. J. Watkins, Pontyclun.

CHAS. F. DAVIES, Hon. Sec.

Jottings.

"*Shiny bees.*"—It has generally been agreed that black, or smooth, shiny bees are those that have seen a considerable amount of wear and tear, and are on the verge of completing their span of activity. This may be mostly true, but under normally healthy conditions who discovers them slacking or dying at the hive stand?

For the last three years I have seen a good many of these bees in this locality irritating and hindering the other occupants of the hive. This went on until in one case the colony died out; in others, dozens during the season were turned out to die, after sundry attempts to enter, to steal, or sojourn, which? In other cases the colonies concerned seemed to be more amiably inclined to these outcasts.

They are decidedly different in shape, being smaller in circumference, the abdomen looking somewhat longer; but in all cases I have seen the markings are the same. I have a small colony where this is going on now, which, curiously enough, balled their queen on examination in the beginning of June, and the virgin successor likewise after a first acceptance. I am hoping this nervousness will be bred out now, *but why these interlopers still?* As far as I can discover they are perfect bees. I have put them down as strangers, until the following recent occurrence. A swarm issued from a colony of almost pure Italians, which was hived about thirty yards from parent stock, and brought home in the evening. The skep was not too crowded, was shaded and ventilated, and on removing the cloth I found some fifty of these scapegoat bees dead on the cloth; so many could not have joined the swarm in flight. In this case I thought them not perfectly developed, the abdomen seemed quite short and stunted; in some cases the thorax, too, seemed shortened and badly nourished. Is this latter theory the secret, or do they lack some special sense of working usefulness, hence the feeling of antipathy shown by the rest of the female occupants? This seems worth testing, as I have seen quite a lot of colonies with these easily detected and hostile bees, but which I feel sure are a component section of the colonies concerned.

A Curious Swarm.—A small colony of three combs, from which a nucleus had been taken, was the means of again emphasising that bees will do nothing invariably. I had just reached home at 5.30 p.m. on one of the cold, windy days recently, when a pint or so of bees set up the swarming tune. I concluded a virgin had been out, and expected them to go back; but, no, they decided to strike out for themselves. I wonder how they decided which were to leave. They kept me from my meal some time before they would choose a spot to receive such a muster, which they ultimately did. I gave them a comb of brood and honey for their pluck.

A good many swarms issued in late July, very large ones, too, bringing forth anxious inquiries as to the advisability of putting them back. I'm afraid by appearances most of them are really a new form of hunger swarms, as the stocks possess very little store, and unless we get more sun I'm afraid we must look forward to some feeding, though this last week there is a slight tendency to store.

A. H. HAMSHAR.

CORRESPONDENCE.

A "Swarm" of Queen Cells.

[10674] Is this a record of queen cells, twenty-one at one hive inspection? I have a particularly strong hive, which I am anxious to work for honey, and *not* swarms, therefore I go through them about every ten days removing queen cells. Last week I managed to seize a clear hour between the storms, and removed twenty-one. Some, of course, were very small, and not worth preservation, but these thirteen were in such excellent condition that I had them photographed.

The bees seem *very* bent on a "house-move." I suppose this is largely due to the wet and cold weather keeping them imprisoned in the hive, and making them feel overcrowded and irritable? They are a marvellously good-tempered stock, having the proud reputation of having stung nobody all through this season.

N. G. KENNEDY BELL.

53, Hornsey Lane Gardens, Highgate, N.6.

[Twenty-one queen cells is not a record. We have seen twenty-four. Some races of bees will build more than that number on one comb.—EDS.]

Prices.

[10675] I entirely agree with Mr. Hemming and Capt. Dutchman anent the excessive price charged for bees and appliances, and I would also add the vexatious and unbusinesslike delay in sending goods, which is usually 14 to 21 days. Messrs. Neighbour, Abbot Bros., and Mr. Baldwin were prompt in sending.

Many years ago Mr. Cowan published a sort of A.B.C., or guide, to bee-keeping, the main object being to induce cottagers to keep bees, and prizes were offered for the best hive suitable for cottagers; these cost about 10s. to 15s. Where are these now? Mr. Smith, in his series of articles in these columns, estimates the cost of two stocks at £20. What working-man could pay that? Yet it is the working-man living in isolated places that should keep bees—many would, but the cost is prohibitive. Ere long it will be only the well-to-do who can afford it. Mr. Hemming must surely have forgotten the old rhyme:

"A swarm of bees in May,
Is worth a load of hay;
A swarm of bees in June,
Is worth a silver spoon;
A swarm of bees in July,
Is not worth a fly."

When he says prices of bees are downward—well, no one but a novice would buy a swarm at the end of June at 8s. or 10s. a pound. A swarm ought to weigh 4lb. at least. I certainly agree with some sort of co-operation, but are not the B.B.K.A. to blame for making no protest against the high prices?

With reference to Mr. Absell's query 9,940—I used to drive a lot of bees, and experienced a difficulty, as they were in all sorts of things—boxes, buckets, skeps, and one was in a butter churn of wood, nearly two inches thick. I could not drive them; I had to take out the combs and brush the bees into my skep. I found the pin no use, so I got two pieces of stiff hoop-iron about ⅜in. wide and 7 to 8 inches long, rivetted the two together in the centre, and then bringing the ends together like this. Having two of these slipped over the edges of the box, the skep would let in the other, holding the skep steadier than a pin. Very often the old skep was rotten, and would not hold a pin. As for September being too late, I was offered half-a-dozen in September, 1916, when I had lost all mine. I sent to Pascall's for 60lb. of candy, so it was October before I had them. I made three lots, and put on foundation and fed with candy. Within ten days they had worked out several sheets and had eggs and stores. The weather was good, and I kept supplying the candy. They wintered well and came out strong in the spring; a pound cake would be gone in two days. The price of honey went up considerably during the scarcity of sugar and jams. Prices may vary in different localities, but it is doubtful if it will be 1s. 6d. wholesale—not a very bright outlook—and if this winterly weather continues, we shall have no honey to sell; but the traders in bees and appliances have already secured their profits.—N. DEVON.

Queen-Rearing Extraordinary.

[10676] More than a month ago I placed a second brood-box on the floorboard of one of my hives, putting the first one (minus the queen) on top, with a sheet of excluder zinc between them. On July 25 I examined the upper brood-chamber, and was surprised to find a sealed queen-cell, which contained a grub that had just begun to spin its cocoon. There was not a single egg, larva, or pupa in the chamber. As it was quite impossible for the queen—a well-developed one—to pass through the excluder, it is obvious that an egg or young grub had been removed from the lower to the upper storey. This is not so remarkable as the stealing by a member of a queenless colony of an egg from another hive, but it is an interesting instance of bee resourcefulness. I have no doubt that others have reported similar experiences.—A. CANNING WILLIAMS, 34, Conway Road, Luton, July 26, 1922.

Bee Shows to Come.

August 19.—Carmarthen and District Allotment and Horticultural Association. Honey; 14 Classes (7 Open) and three Medals (Apis Club Silver Medal, the B.B.K.A. Silver and Bronze Medals).—Further particulars and Schedules of Hon. Secretary, Harry Tew, 21, Priory Street, Carmarthen. **Entries close August 15.**

August 19, at Carmarthen.—Carmarthenshire B.K.A. Show. Good Classes of Honey, Wax, etc. Members' and Open Classes. Valuable prizes, including the Apis Club Silver Medal and the B.B.K.A. Silver and Bronze Medals. **Entries close August 12.** Schedules from H. Tew, Priory Street, Carmarthen.

August 19 and 21, Cannock Show.—Sixteen Classes for Honey (nine Open). Good Prizes. Schedules from Jno. Bird, Secretary, Stafford Road, Cannock, Staffs.

August 23, at Prestbury.—In connection with Prestbury Horticultural Show. Open class for 1-lb. jar. Prizes, 10s. 6d., 7s. 6d., 5s. (entry free).—Schedules from A. H. Bowen, Coronation Road, Cheltenham. **Entries close August 16.**

August 23, at Bartley Cross.—New Forest B.K.A., in connection with the New Forest Agricultural and Horticultural Association. Open and Local Classes for Honey and Appliances.—Schedules from Mr. W. Cooper, Marley House, Netley Marsh, Southampton. **Entries close August 6.**

August 26, at Hinckley, in connection with the Hinckley Sweet Pea and Rose Society's Annual Show.—Open to all bee-keepers. First prize, 12s. 6d.; second price, 7s. 6d.; and third prize, 4s.—Schedules are ready, and may be obtained by sending stamped, addressed envelope to the Hon. Secretary, A. Kimball, 119, Clarendon Road, Hinckley, Leicestershire. **Entries close August 21, 1922.**

August 30, at Chester.—Cheshire B.K.A., in connection with the Cheshire Agricultural Society's Show. Open and County Classes. Good prizes. Send one jar to Gift Class for Chester Hospital.—Schedules from T. A. Beckett, Saint Werburgh Chambers, Chester.

August 31, 1922.—Winchester Domestic Live Stock Association Show. Schedule of Honey Classes Open:—Class 5, one shallow frame; Class 6, six sections of 1922 honey; Class 7, six 1-lb. screw stoppered bottles of 1922 honey; Class 8, trophy of bee products to be arranged on table space 3 ft. by 3 ft.—Entry Forms to be obtained from M. W. Castle, 80, High Street, Winchester.

September 2, Corn Exchange, Rochester.—Medway and County Bee-keepers' Association, in conjunction with the Allotment Holders' Vegetable, Fruit and Flower Show. Eleven Open Classes, including trophy, for which a silver cup is offered. Entry fee for open classes, 1s. each.—Schedules from Mr. A. R. Castle, Y.M.C.A., Maidstone Road, Rochester. **Entries close August 19.**

September 2.—Peterborough, Oundle and District Bee-keepers' Association. Show of honey, Co-operative Hall, Peterborough. Members and Open Classes. Open (entry fee 2s.), 12 bottles Extracted Light Honey, first prize, £1 10s.; second, £1; third, 10s. Gift Class (entry free). Bottle Extracted Honey to be sold for N.U.R. Orphan Fund. First prize, W.B.C. hive; second, Appliances 15s.; third, 7s. 6d.—Schedules and Entry Forms, G. H. Seamer, Hon. Sec., Waterloo Road, Peterborough. **Closing date, August 19, 1922.**

September 2.—Middlesex Bee-keepers' Association, in conjunction with the Fête in aid of Hospital. Show of Honey, Wax and Appliances. Open Classes for shallow frames, sections, and extracted honey.—Schedules and Entry Forms from Mrs. Hodson, Harley Lodge, Private Road, Enfield.

September 6 to 9, at Moor Park, Preston.—Royal Lancs. Show. Seven Open Classes.—Schedules (please state "Honey") from Reg. O. Bradbury, Secretary, Derby House, Preston. **Entries close August 9.**

September 9.—Middlesex Bee-keepers' Association, in conjunction with the Brentford Allotments Association Annual Show, at the Wesleyan School Hall, Clifden Road, Brentford. Twelve Open Classes for Honey, Wax, etc.—Schedules and Entry Forms from R. R. Babbage, 33, Whitestile Road, Brentford, Middlesex.

September 16 to 22.—British Bee-keepers' Association Annual Show at Grocers' Exhibition, Royal Agricultural Hall, Islington, London.—Schedules from Hon. Secretary, B.B.K.A., 23, Bedford Street, Strand, London, W.C.2. **Entries close certain September 4.**

September 21 and 22.—Herts County Bee-keepers' Association, Barnet Branch, in connection with Barnet Allotment Holders' Association's Show. Open Classes for 3 1-lb. Bottle and 3 1-lb. Sections, first prize 20s., second prize 15s., third prize 10s.—Schedules from Norris S. Toms, 60, Fitz-John Avenue, Barnet, Herts.

September 27. — Altrincham Agricultural Society. Largest one-day show. Several Classes for honey, etc., both open and local. Good prizes. Send one jar for Gift Class, to be given to Hospital.—Schedules from H. Turner, 1, Market Place, Altrincham.

September 28, 29, 30.—Kent County and Western Divisional Show at the Crystal Palace. Open Classes to United Kingdom (12 classes). Honey, Wax, Mead, Novelty, Scientific. Schedules from Hon. Show Secretaries, W. E. Clifford, Southlands Road, or E. R. Seadon, Stanley Road, Bromley, Kent.

October 12, at Ongar, in connection with the Ongar and District Agricultural Association.—Extracted and Comb Honey. Open to Essex.—Schedules from G. A. Taylor, Hon. Sec., Ongar and District Bee-keepers' Association, Ashcroft, Ongar.

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THE World's Famous Raspberry, Lloyd George, perpetual fruiting, 30s., 50s., 60s., and 70s. per 100.—J. J. KETTLE, The Violet Farm, Corfe Mullen, Wimborne, Dorset. h.78

PURE Italian Bees, swarms in skeps 30s.; also on four frames 30s.; cheap line, quality good; box 6s., returnable; cash with order.—HORSLEY, Greeba Mills, St. John's, I.O.M. a.h.52

SURPLUS Hives and Bees, five carpenter-made W.B.C. Hives, complete with good, strong, 10-frame stocks, Italian Hybrids, £5 each, or nearest offer the lot.—SMITH, Cherry Orchard, Worcester. h.53

BEE FARM, ¼ acre of land, 36 fruit trees, 1,000 raspberries, large shed; 3 minutes' from London main road and 'buses to Southend, etc.; 28 stocks of bees. One of those spots you often read about but seldom see; £310.—CRACKNELL, Kiln Road Post Office, Thundersley, Essex. h.54

WANTED, W.B.C. or Conqueror Hives; also Extractor; prices and particulars.—LIGHT, Studio, Bee Lines, Bulford Camp. h.55

BEST offer accepted for two healthy Italian Stocks, 1922 queens, in good hives; also Super, Sections, Foundation, etc.—ENTWISTLE, 39, Mount Street, Swinton, Lancs. h.56

SIX Strong Stocks, in good W.B.C. Hives, just right for heather, £3 5s. each, including hives. Owner going away. Bargain. — Apply, M. LAMBOLL, Chiddingfold, Surrey. h.57

FEW Virgins, 2s. 6d.; few Fertiles, 6s. 6d.; from Bozalla Queen.—MURLESS, Ruabon. h.58

TWO 10-frame Stocks, Bozalla Queens, 75s.—MURLESS, Ruabon. r.h.59

WANTED, good geared Extractor.—COWARD, Chilternwoods, Chalfont St. Peter, Bucks. h.61

SOUTH LINCOLNSHIRE Honey, light amber colour, dense and clear, £7 10s. per cwt., in 28 or 56 lb. tins, carriage paid; case and tins free.—W. RODGERS, Meadow Villa, Market Deeping, Lincs. h.62

LADY wanted to join in small Bee and Poultry Farm; sharing profits.—ELLENSCOURT, Doddington, Kent. h.77

FINEST WELSH HONEY, in 28-lb. tins, at 1s. 3d. per lb., tins free; Fruit Honey, in 1-lb. screw caps, at 20s. per dozen; ½ lbs. at 10s. 6d. ditto; f.o.r. SECRETARY, Bee Association, Letterston, Pem.

FOUNDATION PRESS, brood and shallow combined, 30s., delivered; full instructions.—HITCHIN, Marlborough Road, Long Eaton. h.6

BEES.—Two strong Stocks, guaranteed healthy, £2 10s. each; Hives for same, £1.—WIGGINS, The Bungalow, Norton Road, Wembley. r.g.130

SURPLUS BEES, absolutely healthy, 1922 Queen, 8 frames, 50s., carriage paid; box returnable.—ELLIOTT, Fredericks Road, Beccles. r.g.92

SURPLUS DUTCH AND ITALIAN STOCKS. Queens, and large late Swarms from the best honey-gathering and disease-resisting strains; all guaranteed healthy, and headed with 1922 Queens. —Particulars and price to HUDSON, Hayton Smeath, Retford, Notts. r.h.33

HEALTHY, prolific Stocks, Italian Hybrids, Dutch, Carniolans, 6 to 10 frames, 7s. per frame.—REV. COOPER, Elers Road, Ealing. r.g.93

SECTIONS wanted. Good price for best quality. —SMITH & CO., Cambridge Street, Hyde Park, W.2. r.g.99

IF YOU WANT early spring flowers for your bees get Wallflower Plants, 1s. 3d. 100, 5s. 500, carriage paid.—T. TARPLEE, 48, Briar Close, Evesham. r.g.104

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THE WISE BEE-KEEPER looks for quality. The South Hampshire Apiaries breed only from the very best strains. Result: Quality and satisfaction. Beginners' Outfits from £5.—All communications, H. E. NEWTON, New Milton, Hants.

HEALTHY Driven Bees, with queens, 15s. 6d., carriage paid; bees, on 6 frames, strong, £2 5s. —G. A. GILLETT, Moreton-in-Marsh, Glos. h.60

FINEST TINS SOLD, handles, bolted lids, 7 lbs., 10d., 14 lbs., 1s. 2d.; 28 lbs., 1s. 9d. Low price for quantities.—BOWEN. h.66

BEES for the heather, 5-frame lots, good new straight combs, full of capped brood, well covered with bees; this year's queen; Dutch hybrids; guaranteed well packed; immediate delivery, 40s.—H. WILCOX, 42, Warstone Lane, Birmingham. h.64

STOP! LOOK HERE!! Bees for the heather.—Strong stocks of Italians, 10 frames, crowded with bees; price, £4, carriage paid, less 10s. allowed on travelling box when returned; 5 per cent. discount allowed Apis Club members.—HERBERT VALLEY, Apiarist, Saxilby, Lincoln. r.h.65

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FORTY PAGE ILLUSTRATED CATALOGUE POST FREE.

QUADRANT ROADSTER BIKE, 1912 model, good running order, £7, or nearest offer.—L. HAST, Sunny Vale, Alfriston, Sussex. r.h.18

WANTED, small Pump for tank in greenhouse. —Price and particulars to W. HERROD-HEMPSALL, Luton, Beds. f.108

FINEST ENGLISH HONEY, quality guaranteed, in 28-lb. tins, 1s. 3d. per lb.; tins free; f.o.r.—HARVEY, Apiarist, Andover. r.h.76

STOCK of Bees, standards, 50s.; another, £3 10s.; 10-frame stock, on Commercial frames; what offers?—COBB, 33, Bevan Road, Plumstead. r.g.90

ITALIANS, strong Stocks, 1922 tested Penna Queens, 6 frames, 50s.; 8 frames, 60s.; carriage paid; returnable box, 10s. Overstocked.—ASTBURY, West Farleigh, Wylde Green, Birmingham. r.g.101

SELL.—Two small powerful Acetylene Brass Head Lamps, with separate generator, suitable light car or cycle car, £3 the set; Mills' Automatic Acetylene Generating Plant, suitable for 10-roomed house, £6; quantity of Acetylene Gas Brackets and Chandeliers, prices with particulars; all carriage forward.—HERROD-HEMPSALL, Old Bedford Road, Luton, Beds. c.77

MODEL VERTICAL STEAM ENGINE for Sale, cylinder bore 1½ in., stroke 1½ in., slide valve, height 10 in., well made; also piece of 4-in. Copper Tube, sealed both ends, suitable for boiler, 35s. the lot; carriage extra; a bargain.—Box 79a, B.B.J. Office, 23, Bedford Street, Strand, W.C.2. f.141

SEVERAL lots of guaranteed healthy Driven Bees, with queen; supply own boxes; 8s. lot; delivery at once, carriage forward.—MAYNARD, 64, Gipsy Lane, Wokingham. h.63

FAMOUS COTSWOLD QUEENS, 9s. per return; bright, vigorous, prolific.—BOWEN. h.67

SAFE QUEEN INTRODUCTION.—Send 2s. 6d. for tested Cage with instructions.—BOWEN, Coronation Road, Cheltenham. h.68

CORNWALL BEE RE-STOCKING COMMITTEE.—For sale, 3 Dutch Skeps of Bees, 22s. 6d. each; 3-frame Nuclei, 15s.; 4-frame, 18s.; carriage paid; boxes charged 5s., returnable.—A. F. KNIGHT, Hon. Sec., Kenwyn, Truro. h.69

THIS WEEK'S SPECIAL OFFER.—New geared Extractor, tap and lids, 47s. 6d.; Tortora Queens, 6s.—HULBERT, "Châlet," Warwick Road, Olton, Birmingham. h.70

FERTILE ITALIAN QUEENS by return (weather permitting), 7s. 6d.; Hybrids, 5s.—TICKELL.

VIRGIN QUEENS, Italian, 2s. 6d.; Carniolan, 2s. 9d.; Golden, 4s.—TICKELL.

CHEAPER than Driven Bees.—Three-frame Nuclei, 22s. 6d., carriage paid; box 5s., returnable.—TICKELL.

CANDY, 7 lbs. 7s. 6d., 10 lbs. 10s. 6d., post free. —JACK TICKELL, Westbourne Apiary, Cheltenham. r.h.71

PENNA QUEENS.

Address:—E. PENNA, Casella Postale 178, Bologna, Italy.

PRICE LIST FOR 1922.

	August.	September.
One Young Pure Fertile Italian Queen	8/-	8/-

SPECIAL OFFERS, until countermanded, for queens in lots of 4 at a time: From August 1st, **£1 4s.** Orders booked in rotation, cash with order, carriage paid, safe arrival guaranteed. Payment by cheques or British postal orders. International money orders are **not** accepted. 10% discount to Apis Club members on my prices, **except** on "Special Offers."

BEE-KEEPERS preparing for the heather, also those engaged on re-stocking infected districts or have been victims of I.O.W., are strongly recommended to apply for the Surplus Stocks at the Adminson Apiaries, Benson, Oxon. Seven Comb Stocks, in fine condition, headed by splendid Italian and Carniolan Queens of extreme prolificacy and vigour, may be obtained, while available, at no more than £3 10s., carriage paid to any address (10s. *returnable* deposit on travelling box should, in addition, accompany each order). These bees are of the same famous strains that gave the remarkable honey takes in Aberdeenshire last season. h.72

GRAFTON Italian Queens by return, fertiles, 7s. 6d., 3, 20s.; reduction on larger quantities; 3, 4, 6 comb Nuclei, 30s., 35s., 45s., carriage paid. —MASOM & HEDLEY, Grafton Regis, Stony Stratford. h.74

CHOICE COLONIAL HONEY,
in 56 lb. tins, 55s. cwt. Run Honey and Sections required.
THAMES VALLEY BEES (Regd.),
Teddington, S.W.
r.h.73

STRICTLY BUSINESS.—The Acarine Eclipse Cartridge, to use in the smoker, at any time, per dozen, 6s., post paid; Flavine—S Bee Candy, 6 lbs., post paid, 7s.—S. H. SMITH, 30, Maid's Causeway, Cambridge. h.23

RE-QUEEN selected Penna Queens, 8s. each, per return. Quantities or booked advance reduced prices.—GILBERT STONE, Chelsea Road, Easton, Bristol. r.h.38

7/- ITALIAN QUEENS, beauties, giving magnificent colonies heavy storing bees.—ATKINSON, Fakenham. r.h.42

"SPLENDID! No swarms from your queens so far," writes Kent client, July 26. 7s. pure Italians.—ATKINSON, Fakenham. r.h.43

BRIG.-GEN. L., June 23: "Queen arrived safely. Looks first class, and very good value for money." August Queens specially fine, secure yours early, 7s. each, pure Italians.—ATKINSON, Fakenham. r.h.44

CHOICEST ITALIAN QUEENS BRED; great workers. "Your queens have done the best of all I have this year," writes N. The Queens up again with my fine Queens, 7s. each.—ATKINSON, Fakenham. r.h.45

AMPLE SUPPLIES of my fine Italian Fertiles, one, dozen, or hundred; quick delivery; satisfaction perfect.—ATKINSON, Fakenham. r.h.46

"YOUR QUEEN has done very well, filling 10-bar hive with beautiful Italians," writes F. Dozens more express every satisfaction.—ATKINSON, Fakenham. 7s. each. r.h.47

1922 RE-QUEENING.—Book early. Sooner done earlier I can arrange to cover all requirements beyond a considerable estimate already fixed. These Italians make good.—ATKINSON, Fakenham. r.h.48

STRONG 4-frame Nuclei (1922 Italian Queen), 35s.; choice Queens, 7s. 6d.; returnable box 5s. —HOLLINGSWORTH, Heanor. r.h.49

BOTTLES, nominal 1 lb., clear glass, caps and wads, 3s. per dozen.—COBB, 33, Bevan Road, Plumstead. r.g.113

GLASS QUILTS, 16 in. square, no frames, 1s. each; three, post paid, 5s. Glass Squares for glazing sections, 4s. 6d. 100; quantities less.—SMITH, 117, Great Hampton Street, Birmingham. r.g.106

QUEENS.—A few selected 1922 Fertile Italians and Carniolans, 8s. 6d. each; also Italian Virgins, 3s. 6d. each.—ERNEST BLISS, Ranmoor, Dunstable. r.g.85

TORTORA QUEENS.—Address, E. TORTORA, Ozzano Emilia, Bologna, Italy. Special offer for August for no less than two Queen Bees. Special conditions to wholesalers. r.g.91

RE-QUEEN your stocks with Tortora Queens. It will pay you.—HULBERT, "Châlet," Warwick Road, Olton, Birmingham. r.g.107

ITALIAN QUEENS, home bred for white combs, 10s. 6d.; imported Penna Queens, 8s. 6d.; selected, 10s. 6d.; home-bred day-old Virgins, 4s. 6d.; six 10-frame Italian Stocks, right for heather, 60s. per stock. Send cash with order.—TATTERSALL WILLIAMS, The Apiary, Braunton, Devon. r.g.108

FOR SALE, two 4-comb Nuclei, Italians, 30s. each; carriage extra; box 10s., refunded on return.—HERROD-HEMPSALL, Apiary, Luton, Beds. g.112

4-FRAME HYBRID NUCLEI, with 1922 Penna Queens, £2 10s., carriage paid.—DOGGETT, Abbey Apiary, Beche Road, Cambridge. r.g.79

FOR SALE, Simmins' Double Conqueror Hives with section racks and supers, in very good condition, £5 each.—E. R. DEBENHAM, Bladen Apiaries, Dorchester. r.g.75

QUEENS.—Fertile 1922 Italian Hybrids by return of post, price 8s. 6d. each.—HOSEGOOD, "Beecot," Cliff End, Purley, Surrey. h.s.1

QUEENS, Italian, 1922, Penna's strain, fertile, 10s. 6d.; virgins, 3s. 6d.; gentle; Nuclei, 3 or 4 frames, 32s. 6d., 40s.; box 10s., returnable.—WARD, Deeside Nursery, West Kirby. r.g.74

IMPORTED PENNA QUEENS, return, 8s.; 3-frame Nuclei, Penna Queens, 30s.; English Queens, 8s.; Italian or English Virgins, 4s.—STONE, Chelsea Road, Easton, Bristol. r.g.56

FINEST ENGLISH HONEY in 28-lb. cans, 1s. 4d. lb; tins and carriage free.—PEARSON & GALE, Marlborough, Wilts. r.f.171

PENNA STOCKS ARE BEST.—Famous 6-frame Stocks headed by young fertile imported Penna Queen, delivered immediately for 40s.; 3 frames 23s.; Cleopatra Stocks at same price.—THE THAMES VALLEY BEES (Regd.), Teddington. r.f.172

FOR THE HEATHER.—Renowned 6-frame "Utility" Stocks at 45s., carriage paid; 10s deposit on travelling box.—LEE, the Beeman Burgess Hill, Sussex. r.g.54

ITALIAN QUEENS by RETURN OF POST. Tested, 9s. 6d.; Untested, 7s. 6d.—PEARSON & GALE, Marlborough.

HEALTHY DRIVEN BEES, with Queen, 10s. 6d. per lot, carriage paid, commencing August 1; orders now booking in rotation; cash with order; boxes returnable.—PULLEN, Ramsbury, Hungerford. r.g.71

BEES REARED ON ALF. RYALL'S LINES keep well. Buy his advice.

"WIGHT" AND "ACARINE" DISEASES.—Prevention and removal; invaluable advice; 5s. 6d. "An eye-opener."—ALF. RYALL, 8, Ospringe Road, N.W.5. r.c.87

QUEENS by return from April till October.—PEARSON & GALE, Marlborough. w.14

JACK TICKELL.—For Queens, Stocks and Nuclei. List free. — Westbourne Apiary, Cheltenham. r.a.54

DUTCH BEES.—Send for my artistically Illustrated Catalogue outlining my method of managing bees profitably. Read my notes on Queens and Queen Rearing. Will interest the expert and amateur. Free for the asking.—WHYTE, Bee Farm, Cumbernauld Station, Dumbartonshire. r.b.32

GORDON ROWE, 28a, Moy Road, Cardiff, requires gross lots new 1st grade Sections.

PARCHMENT CONTAINERS, stamped "Fine Lemon Curd," offered at half price to honey producers who can affix labels over the printing, 1 lb., 4s. 9d.; ½ lb., 4s.; ¼ lb., 3s. 6d.; ⅛ lb., 2s. 3d. per 100. Add for carriage 1s. 6d. to each 5s. value ordered. Terms cash.

BOOK NOW!—Choicest home-bred Carniolan Queens for 1922.—PEARSON & GALE, Marlborough. b.24

THE
British Bee-Keepers' Association.

Insure *now* against loss by damage done through bee stings. All particulars from

W. HERROD-HEMPSALL, 23, Bedford Street, Strand, London, W.C.2.

The products of the Apiary, of Poultry and Farm Stock of the Fruit and Vegetable Garden can be Advertised and Sold through

THE
Bazaar, Exchange & Mart
Newspaper.

Get a Copy—Thursday and Saturday, 3d. The "Bazaar" publishes also practical handbooks by experts. Send for full catalogue, post free from WINDSOR HOUSE Breams Buildings, LONDON, E.C.2

FOR DRIVEN BEES.

We can offer delivery by return of frames fitted with wired foundation ready for use. 14/9 per doz. post free.

BURTT & SON, GLOUCESTER.

We also have a good stock of honey bottles to offer at reduced prices, 1 lb., ½ lb , 4 oz., and 4 oz. globe shaped ; all with screw caps. Prices and full catalogue of appliances free on application.

THEY are mowing the Sainfoin here in the foothills. On Monday we migrate to Maure, par Seyne-les-Alpes **(4,390 feet above sea-level)** where the Sainfoin is just opening its first flowers and will be followed by sage mountain thyme, lavender, winter savoury, alpine pasture plants and spruce honey-dew, making together a **heavy honey-flow lasting until the Autumn rains and frosts. Queens reared during a heavy, natural honey flow are Nature's best queens.** Only one other breeder on earth, (California, U.S.A.) goes to such trouble and expense in insuring choice queens for his clients : **I** deserve **your** orders ; can **you** afford to order elsewhere ? Only the best queens bring the big profits ; and when you are satisfied, so am :I is that fair ? An **American Beauty** (pure) or a Carniolan Alpine queen mated to an **American Beauty** drone—July 9/-, Aug.-Sept. 8/-. Cash with order.

SKIPWITH CANNELL **Maure, par Seyne-les-Alpes, B.A., France.**

1922. **ITALIAN QUEEN BEES.** **1922.**

August, September, October } 10/- each. "Specials" only.

S. H. SMITH, 30, MAIDS' CAUSEWAY, CAMBRIDGE.

The Bee-Keepers' Calendar.

AUGUST, 1922

17 Thursday. "I c'ud but see thee yesterday
Stung by a fretfull Bee;
And I the Javelin suck't away,
And heal'd the wound in thee." *Herrick, "To Dianeme."*

18 Friday. "The pastured honey-bee drops choicer sweet."
R. Browning, "Cleon."

19 Saturday. "And a footpath
Led through an orchard wide, and disappeared in the meadow,
Under a sycamore tree were hives overhung by a penthouse,
Such as the traveller sees in the regions remote by the roadside,
Built o'er a box for the poor, or the blessed image of Mary."
Longfellow, "Evangeline."

20 Sunday. "As from the hive where bees in summer dwell,
Sorrow seems here excluded."—*Wordsworth, "Greenock."*

21 Monday. "O leave this barren spot to me!
Spare, woodman, spare the beechen tree!
Though bush or floweret never grow
My dark unwarming shade below;
. . . . . .
Nor murmuring tribes from me derive
Th' ambrosial amber of the hive."
T. Campbell, "The Beech Tree's Petition."

22 Tuesday. "Love turn'd himself into a Bee,
And with his Javelin wounded me."
Herrick, "The Showre of Blossomes."

23 Wednesday. "Where Salisbury's level marshes spread
Mile-wide as flies the laden bee."
Whittier, "Snow bound."

The Labelling of Honey.

This matter is one that has been to the front at almost every meeting of bee-keepers for some time past. At the meeting of bee-keepers held at Cambridge during the Royal Show, and reported in our issue of July 20, a resolution urging upon the Government the need of all imported honey being so marked was passed, and a copy was sent by Mr. E. C. R. Holloway to the Board of Trade, and the Ministry of Agriculture. The latter sent their copy forward to the Board of Trade, and the following is a copy of their reply:—

Commercial Relations and Treaties Department, Great George Street, London, S.W.1.

SIR,—With reference to your letter of July 21, I am directed by the Board of Trade to state that the proposals of H.M. Government with regard to the marking of imported goods are embodied in the Merchandise Marks Bill now before Parliament.

The procedure under Clause 1 of the Bill, as it is proposed to amend it, will be as follows:—

(1) It will be open to persons representing (in the Board's opinion) a substantial part of the interests concerned, to lodge

a complaint with the Board that a false impression as to the origin of any imported goods has arisen, or is likely to arise, *by reason of the get up or any artificial characteristics* of the goods when sold or exposed for sale.

(2) If it appears to the Board that the complaint is well-founded, they may refer the matter to a Committee to be constituted under the Bill.

(3) If the Committee report that a false impression has arisen or is likely to arise as above indicated, in the case of the goods in question, the Board will have power to make an Order requiring an indication of origin to be given in the case of all goods of the same class or description made or produced outside the United Kingdom.

It will therefore be for your industry, when the Bill has become law, to lay their case before the Board, in the manner described in the paragraph numbered (1) above.

I am, Sir,
Your obedient servant,
(Signed) H. FOUNTAIN.

Hon. Secretary,
Cambridge and District Bee-keepers' Association,
Burwell, near Cambridge.
August 3, 1922.

This we think makes the matter perfectly clear. Nothing can be done until the Merchandise Marks Bill is passed beyond helping to get it passed as soon as possible, and making certain that the provisions of the Bill will enable bee-keepers to lay their case before the Board with a fair chance of their grievance being removed by an Order being made.

A Dorset Yarn.

"Nature and Nature's laws."

On Friday, when it was very warm and plenty of sunshine, one of the staff came in a great hurry up to the farm. "Come and see the bees in Number 4, I can't understand them, they look like swarming," this was at 5 p.m., as he left off work; he knew there was something different in their behaviour. When down with them afterwards, till quite 6.30 that afternoon, the great assembly of bees was going on; dead drones were lying around the hive, the remainder were flying about in consternation, for no sooner did one attempt to enter the hive, he was at once pounced on by three or more workers and dragged off the alighting board, to take another aimless flight around. The workers were also flying around in crowds; the hurrying out of these workers seemed to put more energy into the males to hurry out in like manner, but when they were out they did not have a welcome back to the only home they had ever known. "Nature's laws" are cruel to these poor, defenceless males, their period of usefulness was past, the young queens were mated, the poor males would not be wanted, they must go out in the cold world to die; or they would be forced out by these remorseless workers. Why, all at once, when nectar was coming in very fast, should they want to purge the hive of all the males? Yet so it was, they had a great assembly as if going to swarm, to lure out the males for the last time; this had been going on, the man said, for some time. The ruling spirit of the hive made the order for expulsion, which was the means used for the end; if they went out on their own it was less trouble to the workers, but one felt it was a cruel law of Nature. They did not do anything for the good of the others, they were not built for collecting food, but were enormous feeders. In the inspection hive they were mostly seen at the open honey vats. The ruthless workers not only dragged them by the wing, but one or more was trying to sting them, no wonder they lay around dead; others were crawling everywhere around.

Here was a case of "Nature's laws" coming into action spontaneously; I was around in the morning about eleven, there was nothing about the hive only the hurrying workers; yet this man (who is afraid of bees) knew there was something unsual going on, he had expected to see them swarm, and as he left off work to advise me of them and their unusual activity, Nature's laws are inexorable. These true communists have carried out the old teaching: "If a man will not work, neither shall he eat." The drones were only tolerated until the last young queens were mated by one of them. The observatory hive showed me that they waited until they saw that the young queen was a good one for laying plenty of eggs, then the general order of extermination went through the hive. All had to go, they each were eating every day as much as six workers could gather. They were too expensive a luxury to keep. Big and handsome they might be, but they must go—food must be stored for the many thousands in winter and early spring. There is no sentiment with these infertile females, big and strong as the males were, one of them was dragging three workers along the alighting board as they were trying to sting him. He tumbled off the front with all three hanging on. The observatory hive proves that they wait till the young bees develop, till the greater part are capped and some are emerging. They want to be sure that the future of the race is assured. Talk about the "massacre of the innocents," the observatory hive shows the workers chasing and biting them relentlessly, when once the worker bee takes a hold she never leaves the poor helpless male, others seeing the chase join in, but the end is the same, "Nature and Nature's laws" are inexorable.

Pope wrote: "Cursed be all laws, but those which love has made." These males were tended by the workers, fed lavishly when in their cradles, were given a bigger cell, capped over more liberally than were the workers, but there was no love as we understand the word, or they could not so ruthlessly destroy them all. They showed a "labour of love"

in tending them in their helplessness, but in this general destruction it is love "to hatred turned," as Congreve wrote hundreds of years back.

Our bees this week are still working fast when weather is fair. The standard combs are ready for extraction, some are capped with the purest whiteness. They are fast finishing the sections off.

There are some very nice sections at the horticultural shows, but not much extracted honey. Visitors still come to see the bees and the rasps, some want to buy parts, and some the whole. The land is the source of all wealth. rains have made vegetables low in price, but fruit sells well. Honey is in great demand, most days buyers come for honey from Natures' flowers, fruit from Nature's flowers fertilised by bees; the old promise still holds good: "Seed time and harvest shall not fail as long as the sun and moon endureth."—J. J. KETTLE.

Jottings from Huntingdonshire

Poor bees! How one feels for them. There they are in their thousands longing to go forth to forage, and the weather forbids. Short spells of fine weather permit of flights, but the temperature is all against nectar secretion, but dinna despair, there's still time for honey to be stored, although it's past time when one can expect surplus, unless, indeed, the next six weeks proved to be 42 days of warmth and sunshine. There has not been for several years, such a wealth of late summer and early autumn flowers as can be seen in wayside fields to-day. We have hereabouts enough restharrow and knapweed to keep many stocks busy. The wild white clover is flowering amazingly, and the mustard bloom only needs the right weather to enable the bees to carry its sweets into the storage cells of the brood-chamber.

During the past week I have been sampling the mud of several counties. I saw no dust, and only twice the sun. Fields under water one expected to see in low lying districts, but it was sad to see hay floating about and stooked oats flooded waist deep. As is usual when I go galivanting about the country, I noted that apiaries were not nearly so thick as one could wish, and I saw only a small number of hives, and even concluding that one should multiply the apiaries one sees by four, there would still be room for many more. I believe I twice forged my way through Mr. Thomas' hundred-mile chain of apiaries, yet despite that fact I hit upon two villages in south-east Gloucestershire, in neither of which could I hear of any bees. I passed a garden in Berkshire which was interesting. In it were beehives of conceivable and inconceivable shapes. Some of these were erected on three legs, pyramid shape. Why so fashioned I know not, and I had no time to stop and inquire. Possibly the owner was establishing Egyptian bees, and thought that by putting them in pyramid hives they would feel more at home. I wonder had they a picture of Sphinx to gaze upon inside! Following this to a logical conclusion, we should always have skyscraper hives for American bees; hives of Florentine architecture for Italians; windmill hives for the Dutch, and, perhaps, some choice wine barrels would accommodate bees imported from France, and Syrian bees might be quite at home in tents. For ourselves we will be content to keep our bees in W.B.C.'s and C.D.B.'s, snug and warm, with a feeder flowing where the stores are short, eagerly looking for that spell of summer weather which the bees are already anticipating. I note wasps are awing, look out for their nests, and use every legitimate method to keep these pests at bay.—E. J. HEMMING, Steeple Gidding.

Week-End Bee-Keeping

By S. H. SMITH.

(*Continued from page* 387.)

We must look below the excluder of hive No. 2 and see how the queen is acting.

But wait a second, "D. B." There is one of our marked bees marching about the entrance, on guard duty already. It is marvellous how quickly strange bees are at home in strange stocks at this season. We shall be observing such traits all through the summer months.

A wave or two of the carbolic cloth, and off comes the excluder. Every comb is drawn out and filled with eggs, larvæ and sealed brood. Some queen! What? Not a cell contains honey; it has all been carried upstairs. We owe this manipulation to Chris. Demaree, of Kentucky. The first time I used it and saw just such a sight as is revealed to us here I took off my hat and marvelled.

It takes a lot of food to nurse along those solid slabs of brood. Hundreds of pounds of nectar and heaps of pollen are used up by such a bee stock to keep its household going. But when you get two or more brood chambers full of bees early in May you have a gathering force that can bring in surplus any day there is any nectar in the fields or woods.

You understand, of course, "D. B.," that these stocks were prepared last autumn. By taking away all drone comb then you can retard a little the swarming tendency in the spring, provided young queens head the stocks in the autumn. But there is a certain annual rhythm manifested by all communistic insect societies. With the hive bee it occurs in the spring. At this season male bees are produced from eggs deposited in certain cells. Maybe it is a psychical phenomenon that stimulates the queen bee when she sees the larger cells. We cannot suppress an instinct handed down during a longer period than we humans have been on the earth. One day a mutation may solve the problem. This may come by means of the drones raised from eggs laid by fertile workers.

All the best bee stocks in the spring are prepared during the preceding autumn months. The careful bee-keeper lays down his stock then with the same solicitude the wine lover displays when laying down wine

in his cellar. In the autumn is a good time to buy bee stocks, as they are cheaper then. If we had known each other last year we could have saved several pounds on the purchase price of our two stocks.

Now for hive No. 1, and we can decide which stock gets the sections. Some Italian bees are better at comb work than others, but none equal our Black bees. Yes, we could enter our still "in the air" sections for the Royal Show, but we should stand about as much chance of getting a prize as a snowball in the lower regions would have of keeping its identity. We could enter for the 1-lb. bottle class in light-coloured honey. But where's our extractor? And our ripener? And we would need a lot of other things.

We could invest some of that £7 10s. you have just pouched. No? That cheque stays pinned to your undervest? Oh! Very well.

The first comb in hive No. 1 is all nectar; there is brood in the second. The third is two-thirds brood, and there are four fine queen cells on it. There is another on the fifth comb. We could make up stock No. 2 from this one brood chamber, but we must go over all the combs.

There are no more queen cells, so we will look below. As good as hive No. 2, but possibly a few more drone cells. The sealed honey combs are better capped, and all the comb work is neater. Hive No. 1 gets the sections.

I've just had an inspiration, "D. B." Please get a newspaper, and I will fetch the queens and the section racks.

Thanks. The "Morning Post" is about the only true blue English paper printed nowadays. Talking about newspapers, "D. B.," it is a good thing the bees don't read them. They would go on strike for doles or pensions, sure. The weather prophets are filling columns about the coming drought, and some of them are predicting five dry, hot summers in succession. You had better hide your wheeled water-tank, and bury that hosepipe before you get mobbed.

We spread the "M. P." evenly over the alighting board of stock No. 1, using the hive roof to support it, and hold down the corners with clods of earth. We open the hive, take out two combs, and shake the bees off, letting them fall a foot away from the entrance. We drop the clipped queen among them, and give a puff or two of smoke. Look at her walking over the backs of the worker bees! Those long legs enable her to outpace them two to one. She heads directly for the entrance, and goes in without hesitation. Hundreds of bees stream in after her, and dozens are lining up and "calling." The hum shows she is welcome. A short while ago those bees were in possession of some fine queen cells, and they were expecting queens. Then they were orphaned and knew it, and showed it. Then a queen arrives, and all is well.

We replace the combs, put on an excluder, set a section rack on top, and close the hive. The rack goes on because there are plenty of bees, and because those combs are crowded with brood and pollen. The bees will carry all incoming nectar upstairs to make room for the queen.

We shall give another rack to stock No. 2, and when we send off these two stocks we shall transfer the section racks, bees and all, to hive No. 1.

Stock No. 2 will receive its queen in a different fashion. We bend back the wire-cloth covering the candy hole and remove the waxed cardboard over the candy, and just push the cage in under the frames. The bees will eat a way in within twenty-four hours.

(To be continued.)

Jottings from Ashdown Forest

Another week gone by, hopes and fears. At times bees going fine, and at evening the "reek" of the hives very strong. Other times dull and wet; woe betide the person having manipulations considered necessary, but there is yet the greatest of hopes; bees are numerous *and vigorous*. Limes, clover, brambles and a host of other high-class honey-producers well watered and of vigorous growth; we can only hope, wait, and see if weather (which nobody can control) turns favourable.

A short time ago the "B.B.J." published a report copied from the "Sussex County Herald," by Rev. Evans, highly interesting. I intended sending another marvellous view of a bee-keeper's place and doings by him, some time since, which I really must admit I didn't hawk about. Now, through an auction sale, the buyer being A. J. R., the face of matters has considerably altered, but I will later send it.

One little point I have heard has got into what I consider very important high quarters, is that I have bought and sold diseased bees. At first I thought, treat it with the contempt it deserved. I have sold rather a lot this last eighteen or twenty months to advertisers in "B.B.J." Doubtless they will see and reply to this through the "B.B.J." I did put one advt. in offering rather cheaply, but as I did not get a single reply nobody was there affected. I am not writing to any buyers, solely relying on their seeing this and acting accordingly.

A. J. RIDLEY.

Horney Common, Uckfield, Sussex.
July 24, 1922.

A Brief Report.

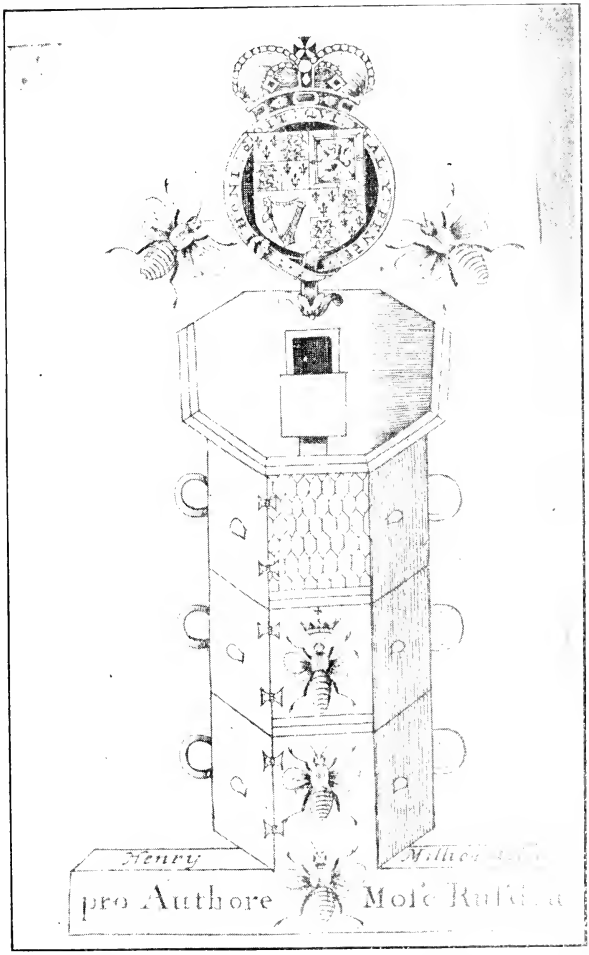
The heather honey flow began rather unexpectedly on August 3, and hives have gained appreciably in weight since then. Those almost deserted supers are once again packed with bees, and powerful colonies may yet give a good account of themselves in the way of making up for lost time.—J. M. E., Grefna, August 7.

John Geddy, of Hilltown, Falkland.

By Lieut.-Col. H. J. O. Walker.

(*Continued from page* 307.).

It is now clear that by some twenty years Gedde was not the first in the field with a tiered octagon hive, and that the credit of having first proclaimed the invention must be given to William Mewe. Was the hive patented by Gedde in 1675 original, or, as has often been alleged, a copy of Mewe's without acknowledgment? Moses Rusden, in the epistle dedicating his book to the Royal Society, describes the hive figured in his frontispiece (see illustration) as "one of the transparent hives first showed us by Dr. Wilkins, late Bishop of Chester, a most eminent member of your Society, which have since received several improvements by one Geddie and since by myself." A few pages later comes the advertisement of the patent granted for it to Gedde and his partners.



This statement has been brought up as damning evidence against Gedde, but, as it now seems to me, with a false idea of Rusden's position and of what he meant by

us. He could not pretend to rank himself with Gedde. He was not one of his partners; merely an agent to sell the hive, and as such would make the most of its connection with the Royal Society. Dr. Wilkins had died in 1672, a year before the notice in the Society's "Transactions" of what proved to be Gedde's hive, the first mention of it, and though Gedde says, "I was three journies to London since the King came home [1661] to 1674," there is no reason to believe that he ever saw Dr. Wilkins at all, still less in the company of Moses Rusden. What Rusden meant was in all probability this: that the particulars of the Doctor's hive had been made public, that when Gedde's appeared it was found to be better, and that he (Rusden) had improved it.

If, notwithstanding what we know of Gedde's character and position, and in spite of his statement that he "fell upon the new experiment in 1668, we decide that before he published his book in 1675* he had already read Mewe's letter to Hartlib, or had heard by report of Mewe's hive, it still remains that without the canny Scot's business push the transparent octagon would have been of little use—a scientific toy.

Mewe's letters to Hartlib were airy and discursive, and when pressed for a full description or demonstration of his system he was eloquent as to the ornament he had bestowed on his hives and silent as to the working of them. Christopher Wren professed himself puzzled. Gedde put the hive on the market will full instructions and made it a success.

The story is not yet quite told. In his 2nd Edition, 1676, Gedde published a letter received from the Revd. Samuel Mew, dated Easton, in Gloucestershire, July 21, '75. This was not Hartlib's William, shorn of his E, and transferred to another Parish. For the misprint Eaſington read Eastington, familiarly East'on. In that thriving town the Revd. Wm. officiated from 1635 to 1639, when he died or departed, leaving his Rectorship and the bees to Samuel. The relationship between the two is not to be gleaned from register or tombstone: in a list of Rectors they are clubbed together as "The Mews," 1633—1706." "Worthy Sir," writes Samuel Mew, "I have with great delight perused the directions you have given to the public concerning your new invention. . . . I have had for these twenty years and upwards the opportunity and content to observe these pretty artists you contrive for, at work, through glass placed for that purpose. . . . . " He then describes his difficulties, mainly that he does not known when to take off the top storey, asks advice, and concludes: "I congratulate you [on] your happy invention, and the perfection it is already reached to, the Royal Society's approbation and your own seven years' experience; I am the more reall herein in regard I have formerly imployed and wearied my own thoughts on this subject and was fain at last to give it over as unfeasible; partly from the inconvenience abovesaid and partly for the want of an apprehensive workman; but now I am where I would be, at another's trouble, and may enjoy the fruits of your pains at an easy rate. I heartily wish your profit may pay your labours both as you are an inventor and a Bee-master. If, Sir, your occasions will suffer, and you think fit to favour me with a line or two, be pleased, I pray, to send the price of one of your Boxes with the Frame, as also of a Licence from yourself to make use of it, and you will yet further engage your unknown but real friend and Servant, Samuel Mew."

The humour of it, the Gilbertian topsiturviness! Gedde entreated to advise for the apiary from which, as some would have it, he had stolen the idea of his own hive. His feelings as he read the letter we can only conjecture; it was answered right royally. "And for your further satisfaction I have sent with the Gloucester carrier one Colony of Boxes, one Licence, and a Book of directions, to be used by you, as a token of my respects to a Person of so much worth; hoping that after you have received and viewed the Colony, there will rest no place for any further scruple."

It appears elsewhere that the price of a bee-house and three colonies consisting of nine boxes, together with all conveniences needful, and a licence, did not exceed £4 10s., but this meant much more then than it does now.

An account of John Gedde can hardly be complete without reference to his influence as a bee-keeper beyond the limit of his own country, which can be done more conveniently in a separate short chapter.

(To be continued.)

* In a postscript to the 3rd Edn., 1677 he refers to "famous Mr. Charles Butler, Mr. Hill, of London, Mr. Hartlib, Doctor Mewe, Doctor Wilkins, Mr. Purchase, and many others whose writings are yet in print.

Scottish Bee-Keepers' Association.

The Scottish Bee-Keepers' Association held their annual honey exhibit conjointly with the Highland and Agricultural Show at Dumfries on July 18, 19, 20, and 21. The weather was ideal, except for a shower or two of rain in the afternoon of the 20th and the morning of the 21st, but it cleared up nicely in the afternoon of the 21st. The amount of prize money offered was £54; also the S.B.A. silver melal and the silver and bronze Apis Club medals.

There were 126 entries, which was a large increase on the previous shows. Owing to the failing honey flow about three weeks before the show, a few exhibits did not come forward.

There was one marked feature in the way the exhibitors sent their exhibits to be staged. They were sent in boxes which were easily opened and the contents removed, and when being packed by the committee appointed for that purpose they all slipped back into their places without displacement of material. Only two exhibits were sent

that were not so conveniently packed—one in bran and the other packed in a cardboard box with a large quantity of paper, which caused a little inconvenience in repacking. If exhibitors would only understand that they run the chance of the exhibit not being staged at all when the packing is not in accordance with the regulations. But we do not like to disqualify any person if we have time to stage before judging.

There were seven demonstrations and lectures given daily in the bee tent by various lecturers, which attracted large crowds, and many questions and inquiries were made.

The following list is the award of prizes and medals:—

OPEN CLASSES.

APPLIANCES.

Class 1.—Collection of Hives and Appliances, to include amongst other articles the following: Three Standard Frame Hives complete, fitted with arrangements for supering. A suitable outfit for a beginner in bee-keeping—premiums, 80s., 40s., 20s.:—1st, R. Steele & Brodie, Wormit, Fife; 2nd, Lindsay & Fenwick, 143, South Street, Perth.

Class 2.—Best and most complete Standard Frame Hive for general use, unpainted—premiums, 20s., 15s., 10s.—1st, R. Steele & Brodie, Wormit, Fife; 2nd, Lindsay & Fenwick, 143, South Street, Perth.

Class 3.—Best and most complete Standard Frame Hive for cottager's use, unpainted, price not to exceed 35s.—premiums, 20s., 15s., 10s.:—1st, Lindsay & Fenwick, 143, South Street, Perth; 2nd, R. Steele & Brodie, Wormit, Fife.

Class 4.—Any New Appliance connected with bee-keeping to which no prize has been awarded at any previous Highland Show—premiums, 10s., 5s.:—1st, R. Steele & Brodie, Wormit, Fife.

HONEY, &c.

The Rosebery Silver Medal, awarded by the Scottish Bee-keepers' Association to the winner of the greatest number of points in Honey Classes, calculated on the following basis: 1st prize, 3 points; 2nd prize, 2 points; 3rd prize, 1 point:—William Gilchrist, Netherhall, Castle-Douglas, 12 points.

The Apis Club Bronze Medal, awarded to the winner of the second highest number of points; winners must be at the time members or affiliated to the Scottish Bee-keepers' Association:—Richard Grierson, Carrutherstown, Ruthwell, 8 points.

Class 5.—Six Sections of Comb Honey—premiums, 20s., 15s., 10s.:—1st, William Gilchrist, Netherhall, Castle-Douglas; 2nd, Richard Grierson, Carrutherstown, Ruthwell; 3rd, Miss Mary E. Brown, The Old Schoolhouse, Cramond; v., Robert M'Call Wilson, Longbank, Kirkmahoe, Dumfries.

Class 6.—Six jars of Run or Extracted Light-coloured Honey, approximate weight 6 lbs.—premiums, 20s., 15s., 10s.—1st, Miss P. E. M'Kenzie, Summerfield, Torthorwald Road, by Dumfries; 2nd, John Birkett, Rainhill, Lancashire; 3rd, Richard Grierson, Carrutherstown, Ruthwell; v., William Shuker, High Street, Hale, near Liverpool; h., James Cochran, 18, Dundonald Road, Kilmarnock.

Class 7.—Six jars of Run or Extracted Medium or Dark-coloured Honey, excluding heather, approximate weight 6 lbs.—premiums, 20s., 15s., 10s.:—1st, Mrs. A. M'George, The Smithy, Torthorwald, Dumfries; 2nd, D. J. Griffiths & Aubrey, Upper Lhedi Reservoir, Felinfoel, Llanelly; 3rd, James Cochran, 18, Dundonald Road, Kilmarnock; c., William Boyd, Newlands Gardens, Dumfries; c., Robert M'Call Wilson, Longbank, Kirkmahoe, Dumfries.

Class 8.—Six jars of Pressed Heather Honey in liquid form, approximate weight 6 lbs.—premiums, 20s., 15s., 10s.:—1st, Alexander White, Sunnyhill, Old Cumnock; 2nd, T. Gordon & Sons, Torbrex Nurseries, Stirling; 3rd, William Boyd, Newlands Gardens, Dumfries; v., Donald Macdonald, Schoolhouse, Millhouse, Argyll; h., Robert M'Call Wilson, Longbank, Kirkmahoe, Dumfries.

Class 9.—Six jars of Granulated Honey, approximate weight 6 lbs.—premiums, 20s., 15s., 10s.:—1st, James Cochran, 18, Dundonald Road, Kilmarnock; 2nd, T. Gordon & Sons, Torbrex Nurseries, Stirling; 3rd, William Boyd, Newlands Gardens, Dumfries; v., William Gilchrist, Netherhall, Castle-Douglas; h., Miss P. E. M'Kenzie, Summerfield, Torthorwald Road, by Dumfries.

Class 10.—One shallow frame of Comb Honey for extracting purposes—premiums, 20s., 15s., 10s.:—1st, William Gilchrist, Netherhall, Castle-Douglas.

Class 11.—Products made with the aid of honey; recipe to be attached—premiums, 20s., 15s., 10s.:—1st, Miss P. E. M'Kenzie, Summerfield, Torthorwald Road, by Dumfries; 2nd, Mrs. A. M'George, The Smithy, Torthorwald, Dumfries.

Class 12.—Best display of Honey in any form staged in space 3 ft. by 3 ft., height from table not exceeding 4 ft.; weight of honey not to exceed 100 lbs.—premiums, 60s., 30s., 20s.:—1st, William Gilchrist, Netherhall, Castle-Douglas; 2nd, T. Gordon & Sons, Torbrex Nurseries, Stirling.

Class 13.—Best exhibit of not less than 1 lb. of Wax in any form: premiums, 20s., 15s., 10s.:—1st, William Gilchrist, Netherhall, Castle-Douglas; 2nd, Robert Harper, Sauchenward, Botriphnie, Keith; 3rd, T. Gordon & Sons, Torbrex Nurseries, Stirling; v., Miss Rachel Munro, The Kennels, Glenrinnes, Dufftown.

Class 14.—Best exhibit of not less than 1 lb. of Wax made into shape for retail trade and over-counter trade—premiums, 20s., 15s., 10s.:—1st, James Cochran, 18, Dundonald Road, Kilmarnock; 2nd, Miss Rachel Munro, The Kennels, Glenrinnes, Dufftown; 3rd, Robert M'Call Wilson, Longbank, Kirkmahoe, Dumfries.

Apis Club Silver Medal for best exhibit in Class 15:—T. Gordon & Sons, Torbrex Nurseries, Stirling.

Class 15.—Observatory Hive with Queen and Bees—premiums, 50s., 30s., 15s.:—T. Gordon & Sons, Torbrex Nurseries, Stirling.

Class 16.—Exhibit of a scientific nature not mentioned in the foregoing classes, to which no prize has been awarded at any previous Highland Show—premiums, 20s., 15s., 10s.:—1st, R. Steele & Brodie, Wormit, Fife; 2nd, Robert M'Call Wilson, Longbank, Kirkmahoe, Dumfries.

CONFINED TO SCOTTISH EXHIBITORS.

Class 17.—Six sections of Comb Honey—premiums, 30s., 20s., 10s.:—1st, William Gilchrist, Netherhall, Castle-Douglas; 2nd, Richard Grierson, Carrutherstown, Ruthwell; 3rd, Robert M'Call Wilson, Longbank, Kirkmahoe, Dumfries; v., William Boyd, Newlands Gardens, Dumfries.

Class 18.—Six jars of Run or Extracted Medium or Dark-coloured Honey, approximate weight 6 lbs.—premiums, 30s., 20s., 10s.:—1st, Donald Macdonald, Schoolhouse, Millhouse, Argyll; 2nd, Alexander White, Sunnyhill, Old Cumnock; 3rd, Mrs. A. M'George, The Smithy, Torthorwald, Dumfries; v., Robert M'Call Wilson, Longbank, Kirkmahoe, Dumfries.

Class 19.—Six jars of Run or Extracted Light-coloured Honey, approximate weight 6 lbs.—premiums, 30s., 20s., 10s.:—1st, Richard Grierson, Carrutherstown, Ruthwell; 2nd, Miss P. E. M'Kenzie, Summerfield, Torthorwald Road, by Dumfries; 3rd, James Cochran, 18, Dundonald Road, Kilmarnock; v., James G. Hamilton, Oxford Place, Garelochhead; h., Robert M'Call Wilson, Longbank, Kirkmahoe, Dumfries; c., William Gilchrist, Netherhall, Castle-Douglas; c., T. Gordon & Sons, Torbrex Nurseries, Stirling.

A. AIKMAN BLAIR,
Convener, Show Committee.

Notts Beekeepers' Association.

On Saturday, August 15, the members of the above Association, with their friends, made an excursion to the Agricultural and Dairying College at Sutton Bonnington, where they were received by the Principal, Dr. Wm. Goodwin, D.Sc., N.D.D., etc., etc. The party, numbering over 70, were shown round the college and grounds, partook of tea which had been prepared in the spacious dining hall, to which all did justice, and which was greatly enjoyed.

After a short breathing space the company assembled in the large lecture hall to hear a

discourse from Dr. A. Z. Abushâdy, on "After the Honey Flow." This was listened to with keen interest as the Doctor brought out point by point the things necessary to observe and to do at the period named.

This brought on a lively discussion, and many questions were put and answered, and everyone appeared surprised when they were told the meeting would have to be closed to enable them to catch their train.

Nearly all expressed their satisfaction at the enjoyable, interesting, and instructive outing in which they had participated, and like Oliver Twist, asked for more such times, so one has been arranged to take place on October 7, at Nottingham.

GEO. HAYES, Hon. Secretary.

Bee-Keeping in Scotland.

The quarterly meeting of the Executive Council of the Scottish Bee-keepers' Association was held as usual on the occasion of the Highland Agricultural Society Show, this year at Dumfries.

Mr. Henry Marrs, Lochmaben, president of the Association, presided.

After disposing of a good deal of routine business the Rev. John Beveridge, Gartmore, convener of the Education Committee, reported the results of the examinations for proficiency in practical bee-keeping, as follows:—

Expert Bee-master (E.B., S.B.A.) passes.—Robert Y. Howie, M.A., Ruthergien; John Sherry, M'Nairstone, Ayr; James Cossar, Grove End, Lasswade; David Landale, Gowrie House, Kirkcaldy; James Gordon, Torbrex, Stirling; William Hamilton, 74, Cromwell Street, Glasgow.

Bee-master Certificates (B., S.B.A.) passes were as follows:—John Dunbar, Bucksburn, Aberdeen; Capt. Cedric S. Scott, Mrs. Scott, Adam A. Barr, Mrs. A. A. Barr, J. M. Baird, James Halliday, Thomas Ritchie, Robert Ritchie, Alexander Watt, Skelmorlie, Ayrshire; Thomas Wightman, Moffat; Miss J. Rutherford, Mountainhall; Miss P. MacWilliam, Moniaive, Dumfries; Rev. Dr. John Campbell, D. M'Lean, Alexander Purves, Kirkcaldy; Thomas Dow, Markinch; Mrs. Eva Balfour Graham, Leven, Fife; Charles D. Dempster, Shettleston; Thomas Thomson, Stonehouse; H. M. MacCallum, Thorntonhall, Lanarkshire; James Pirie, Milngavie, Dumbartonshire; Lawrence S. Gordon, Torbrex, Stirling.

Mr. Beveridge said that the number of certificates gained since these were first instituted three years ago now exceeded 300. The holders of these certificates were to be found in every county except Haddington and Nairn. Certificated honey judges numbered 25. Of these, Aberdeenshire had 4; Ayrshire, Midlothian, and Perthshire 3 each; the other 12 were distributed over the country, but there were still 19 counties that had no certificated judge. The counties having more than 20 bee-master or expert certificates were: Ayrshire 27, Fife 24, Aberdeen 22, and Perthshire 21. The successful candidates, on the average, had been bee-keepers for eleven years, and possessed six stocks of bees each. Of the 25 honey judges, one only, Miss N. M. Robinson, Glassel, was a lady. Of the 70 experts five were ladies, and of the 220 bee-masters 30 were ladies. The percentage of marks gained by the successful candidates for the expert certificate was 79.9, and for the bee-master certificate 82.1.

Bridgnorth & District Bee-keepers' Association.

This Association, after struggling through the ravages of I.O.W. disease, held its first exhibition of honey since 1915 in connection with the Bridgnorth Agricultural Show on August 10, 1922. The total number of entries for honey was twenty-nine. The quality was very good, and competition keen. Thus the judge had a difficult task to decide which should take first place on the stage. Mr. J. S. Lawton acted as adjudicator, and made the following awards:—

Class 1.—Three jars light honey: 1, H. Hulme; 2, Mrs. Logan; 3, W. Shuker.

Class 2.—Three jars dark honey: 1, C. Walsh.

Class 3.—Three sections of comb honey: 1, E. P. Ridley; 2, Mrs. T. Smith.

Class 4.—Trophy, first prize, withheld. One entry by H. Hulme was awarded second prize, 10s.

Class 5.—Gift of one jar. 1, H. Hulme; 2, W. Shuker; 3, J. Gregory.

Rev. G. E. H. Pratt, expert and lecturer to the Shropshire County Council, gave a lecture and demonstration in the bee tent, which was much enjoyed, and great interest was taken. Many questions were asked, and answered by the lecturer. The committee thank those who contributed to the gift class; also they appreciate the services of the "B. B. J." in advertising the show, and thus helping to make our show a success.

(Communicated.)

Somerset Bee-Keepers' Association.

FROME BRANCH.

An interesting lecture and practical demonstration was given under the auspices of the Somerset County Council at the Frome Oddfellows' annual floral and horticultural exhibition on August 7, 1922, by Mr. L. Bigg-Wither, expert to the Somerset Bee-keepers' Association.

The day was fine, and a very large company assembled at the bee tent to hear the lecture and see the hive of bees manipulated, and it was also a great pleasure to the bee-keepers present to have their late general secretary with them.

Mr. Bigg-Wither is to be congratulated upon the lectures given at various times in this district, as they have done much to stimulate the revival of bee-keeping in this division.

E. G. HAWKINS,
Hon. Secretary.

Show at Bartley Cross.

May I ask for leave, through the medium of your paper, to invite all bee-keepers to the honey show organised by the New Forest Agricultural Society at Bartley Cross on the 23rd inst.?

Weather permitting, there will be demonstrations, but this show should provide an opportunity for bee-keepers who may be down south for their holidays to meet with their fellow-craftsmen to compare notes.

I admit the weather has not been very kind to us for honey producing this season, but entries are still coming in, and I believe Mr. Cooper, the hon. secretary, would be prepared to accept late entries should it be found possible to enter between now and August 19.

H. P. YOUNG,
County Council Staff Instructor.

The Associateship of the Apis Club.

Subject to receiving sufficient applications by August 31, the first tuition course and examination for this advanced qualification will be inaugurated next month by the *Apis Club*, otherwise it will be deferred to next year. Readers are advised to apply without delay to the offices of the Club at Benson, Oxon., for printed particulars, which are supplied free of charge. There are restrictions in relation to the examination, but not in regard to the tuition course which is open to all bee-keepers who pay the necessary fee.

Notices to Correspondents

"ECONOMY" (Chilwell).—*Feeding bees with foreign honey.*—If a good grade of honey is used, there is no objection to it beyond the risk of disease. This can to a great extent be eliminated by boiling. It is better to add some water before doing so, and to boil for at least 20 minutes. Use a large pan, do not put too much honey and water in it, and do not have too fierce a fire once the mixture is boiling—only just enough to keep it boiling.

"GIPPESWYK" (Norfolk).—*Making mead from fermenting honey.*—Making mead or vinegar is all that fermenting honey is fit for. We believe it is better to add water to the honey and boil for a few minutes to kill any undesirable ferments, and to start fermentation again, when the mixture has cooled sufficiently, with brewer's or ordinary yeast, but we have used fermenting honey for making vinegar quite satisfactorily without this precaution.

Insuring hives and bees against loss by fire.—We should say any fire insurance company would do this. Inquire from one of your local agents.

Bee Shows to Come.

A nominal charge of 2s. 6d. is made for notices (not exceeding 7 lines) in this column, 10 lines charged 3s. 6d. up to 15 lines 5s., which covers cost of insertion from order till date of show. Cash should accompany orders for insertion.

August 19.—Carmarthen and District Allotment and Horticultural Association. Honey: 14 Classes (7 Open) and three Medals (Apis Club Silver Medal, the B.B.K.A. Silver and Bronze Medals).—Further particulars and Schedules of Hon. Secretary, Harry Tew, 21, Priory Street, Carmarthen. **Entries closed.**

August 19, at Carmarthen.—Carmarthenshire B.K.A. Show. Good Classes of Honey, Wax, etc. Members' and Open Classes. Valuable prizes, including the Apis Club Silver Medal and the B.B.K.A. Silver and Bronze Medals. **Entries closed.** Schedules from H. Tew, Priory Street, Carmarthen.

August 19 and 21, Cannock Show.—Sixteen Classes for Honey (nine Open). Good Prizes. Schedules from Jno. Bird, Secretary, Stafford Road, Cannock, Staffs.

August 23, at Prestbury.—In connection with Prestbury Horticultural Show. Open class for 1-lb. jar. Prizes, 10s. 6d., 7s. 6d., 5s. (entry free).—Schedules from A. H. Bowen, Coronation Road, Cheltenham. **Entries closed.**

August 23, at Bartley Cross.—New Forest B.K.A., in connection with the New Forest Agricultural and Horticultural Association. Open and Local Classes for Honey and Appliances.—Schedules from Mr. W. Cooper, Marley House, Netley Marsh, Southampton. **Entries closed.**

August 26, at Hinckley, in connection with the Hinckley Sweet Pea and Rose Society's Annual Show.—Open to all bee-keepers. First prize, 12s. 6d.; second prize, 7s. 6d.; and third prize, 4s.—Schedules are ready, and may be obtained by sending stamped, addressed envelope to the Hon. Secretary, A. Kimball, 119, Clarendon Road, Hinckley, Leicestershire. **Entries close August 21, 1922.**

August 30, at Chester.—Cheshire B.K.A., in connection with the Cheshire Agricultural Society's Show. Open and County Classes. Good prizes. Send one jar to Gift Class for Chester Hospital.—Schedules from T. A. Beckett, Saint Werburgh Chambers, Chester.

August 31, 1922.—Winchester Domestic Live Stock Association Show. Schedule of Honey Classes Open:—Class 5, one shallow frame; Class 6, six sections of 1922 honey; Class 7, six 1-lb. screw stoppered bottles of 1922 honey; Class 8, trophy of bee products to be arranged on table space 3 ft. by 3 ft.—Entry Forms to be obtained from M. W. Castle, 80, High Street, Winchester.

September 2, Corn Exchange, Rochester.—Medway and County Bee-keepers' Association, in conjunction with the Allotment Holders' Vegetable, Fruit and Flower Show. Eleven Open Classes, including trophy, for which a silver cup is offered. Entry fee for open classes, 1s. each.—Schedules from Mr. A. R. Castle, Y.M.C.A., Maidstone Road, Rochester. **Entries close August 19.**

September 2.—Peterborough, Oundle and District Bee-keepers' Association. Show of honey, Co-operative Hall, Peterborough. Members and Open Classes. Open (entry fee 2s.), 12 bottles Extracted Light Honey, first prize, £1 10s.; second, £1; third, 10s. Gift Class (entry free). Bottle Extracted Honey to be sold for N.U.R. Orphan Fund. First prize, W.B.C. hive; second, Appliances 15s.; third, 7s. 6d.—Schedules and Entry Forms, G. H. Seamer, Hon. Sec., Waterloo Road, Peterborough. **Closing date, August 19, 1922.**

September 2.—Middlesex Bee-keepers' Association, in conjunction with the Fête in aid of Hospital. Show of Honey, Wax and Appliances. Open Classes for shallow frames, sections, and extracted honey.—Schedules and Entry Forms from Mrs. Hodson, Harley Lodge, Private Road, Enfield.

September 6 to 9, at Moor Park, Preston.—Royal Lancs. Show. Seven Open Classes.—Schedules (please state "Honey") from Reg. O. Bradbury, Secretary, Derby House, Preston. **Entries closed.**

September 9.—Middlesex Bee-keepers' Association, in conjunction with the Brentford Allotments Association Annual Show, at the Wesleyan School Hall, Clifden Road, Brentford. Twelve Open Classes for Honey, Wax, etc.—Schedules and Entry Forms from R. R. Babbage, 33, Whitestile Road, Brentford, Middlesex.

September 13, at Twickenham.—Twickenham Horticultural Society's Vegetable Exhibition. Honey exhibits under the control of Twickenham and Thames Valley B.K.A. Open classes for single jar and section. Schedules from Miss M. Byatt, "Hawthorn," Hanworth, Middlesex. **Entries close September 8.**

September 16.—Moseley and King's Heath Horticultural Society and South Staffordshire Bee-keepers' Association. Five Open Classes for sections, light and medium honey in jars, also beeswax. Several Local Classes. Schedules from H. C. Weston, 37, Pineapple Road, King's Heath, Birmingham.

September 16 to 22.—British Bee-keepers' Association Annual Show at Grocers' Exhibition, Royal Agricultural Hall, Islington, London.—Schedules from Hon. Secretary, B.B.K.A., 23, Bedford Street, Strand, London, W.C.2. **Entries close certain September 4.**

September 21 and 22.—Herts County Bee-keepers' Association, Barnet Branch, in connection with Barnet Allotment Holders' Association's Show. Open Classes for 3 1-lb. Bottle and 3 1-lb. Sections, first prize 20s., second prize 15s., third prize 10s.—Schedules from Norris S. Toms, 60, Fitz-John Avenue, Barnet, Herts.

September 27.—Altrincham Agricultural Society. Largest one-day show. Several Classes for honey, etc., both open and local. Good prizes. Send one jar for Gift Class, to be given to Hospital.—Schedules from H. Turner, 1, Market Place, Altrincham.

September 28, 29, 30.—Kent County and Western Divisional Show at the Crystal Palace. Open Classes to United Kingdom (12 classes), Honey, Wax, Mead, Novelty, Scientific.—Schedules from Hon. Show Secretaries, W. E. Clifford, Southlands Road, or E. R. Seadon, Stanley Road, Bromley, Kent.

October 12, at Ongar, in connection with the Ongar and District Agricultural Association.—Extracted and Comb Honey. Open to Essex.—Schedules from G. A. Taylor, Hon. Sec., Ongar and District Bee-keepers' Association, Ashcroft, Ongar.

Special Prepaid Advertisements

One Penny per Word.

Advertisements must reach us NOT LATER than FIRST POST on MONDAY MORNING for insertion in the "Journal" the same week.

Trade advertisements of Bees, Honey, Queens, and Bee goods are not permissible at above rate, but will be inserted at 1½d. per word as "Business" Announcements, *immediately under the Private Advertisements. Advertisements of Hive-manufacturers can only be inserted at a minimum charge of 6s. per ½in., or 12s. per inch.*

PRIVATE ADVERTISEMENTS are only intended for readers having **Surplus Stock** *to dispose of.* **Driven Bees, Nuclei,** *and* **Queens that are reared or imported for sale,** *are Trade Advertisements, and can only be accepted under trade terms. A charge of 6d. extra per insertion will be made if a box number is used.*

Orders for three or more consecutive insertions in "The Bee Journal" entitle advertisers to one insertion in "The Bee-Keepers' Record" free of charge.

Will advertisers please read these Rules carefully in order to save trouble, as they will be strictly adhered to.

PRIVATE ADVERTISEMENTS.

A SPLENDID 10-FRAME STOCK of pure Italians, 55s. 6d.; also Italian Hybrid, 50s.; guaranteed healthy, and to give satisfaction; proved good honey gatherers.—CURTIS, 1, Nimrod Road, Streatham. h.79

THROUGH ILLNESS, H. Robins, 290, Priory Road, St. Denys, Southampton, must sell 12 Stocks of healthy Italian Hybrid Bees with good Hives, double walled and insulated, 10 to 20 frames, full of bees and brood; would part them; buyer to move them; inspection invited. What offers? h.80

PURE ENGLISH HONEY for Sale. Several gross sections, 18s. dozen; Run Honey, 1-lb. screw-capped bottles, 16s. dozen; tins, 28 lbs., for 30s.; f.o.r.—T. NORRIDGE, Eastern House, Anna Valley, Andover. r.h.81

HEALTHY STOCKS Dutch Hybrids, 50s.; Simmins', on commercial frames, 75s.—Beech Cottage, Longton, Preston. r.h.83

SURPLUS BEES.—Healthy, two 10-frame Stocks, 45s. each; two 5-frame, 23s. each; one 7-frame, 32s.; all carriage paid; boxes free.—DRAKE, "Kohinoor," Tollesbury. h.103

TWO healthy Italian Stocks, 1922 Queens, in good hives, supered, £2 10s. each.—ENTWISTLE, 39, Mount Street, Swinton, Lancs. h.92

ITALIAN HYBRIDS.—Forty Stocks and Swarms, in one lot, or would divide; must be sold owing to ill-health; price £130.—POCOCK, Cold Ash, Newbury. h.82

NEW HIVE, two supers, lift, 25s. 6d.; Second-hand ditto, three supers, lift, oak legs, well painted; Nucleus, 10s.; warranted healthy; photo. 3d.—40, Woodfield Grove, Patricroft. h.86

20 SUBSTANTIAL HIVES for Sale, now in use, replacing with W.B.C. pattern, offering cheap.—SPECK, South Yardley, Birmingham. r.h.87

BEES.—Five healthy, strong Stocks, Italians, excess of requirements, being offered.—SPECK, South Yardley, Birmingham. r.h.88

SURPLUS.—Bottles, Extractor, Feeders, etc., new, carriage paid. Write for particulars.—SPECK, South Yardley, Birmingham. r.h.89

4/- EACH, fertile Queens, 1922, Italians, mismated; four only.—FAGAN, Newdigate, Surrey. h.90

GOOD Geared Extractor, pre-war, 55s.; strong 6-frame Stocks, new combs, 37s. 6d.—MATTHEWS, 25, Cray Road, Crockenhill, Swanley, Kent. h.91

EXTRACTED ENGLISH HONEY, £7 per cwt.; sample 3d.—DUTTON, Terling, Essex. h.109

FEW good fertile Hybrid Queens, 6s. each.—ADKINS, Highmoor, Harpenden. r.h.85

LARGE HONEY EXTRACTOR, reversible, cog gear; two large Honey Ripeners, with strainer and sieve; large Wax Extractor; Standard Show Case, double glass; No. 4 Daisy Vacuum Cleaner, nearly new, in perfect working condition; the lot £5 5s.; deposit, or first cash secures.—THOS. PARKIN, 21, Muschamp Villas, Warson, Notts. h.93

LIGHT LEICESTERSHIRE HONEY, £7 10s. per cwt.; tins and carriage free; 28-lb. tins; sample 4d.—ERNEST HULL, North Street, Barrow-on-Soar. h.107

FORD-WELLS' DOUBLE HIVE, good condition, just repainted, price £4.—Can be seen at 3, Exeter Street, Holloway Head, Birmingham. h.110

CARNIOLANS, Strgar's Queen, extra strong 10-frame Stock, 70s.; box 10s., returnable.—WOODWARD, 1, Queen's Road, High Wycombe.

THE World's Famous Raspberry, Lloyd George, perpetual fruiting, 30s., 50s., 60s., and 70s. per 100.—J. J. KETTLE, The Violet Farm, Corfe Mullen, Wimborne, Dorset. h.78

PURE Italian Bees, swarms in skeps 30s.; also on four frames 30s.; cheap line, quality good; box 6s., returnable; cash with order.—HORSLEY, Greeba Mills, St. John's, I.O.M. a.h.52

TWO 10-frame Stocks, Bozalla Queens, 75s.—MURLESS, Ruabon. r.h.59

FINEST WELSH HONEY, in 28-lb. tins, at 1s. 3d. per lb., tins free; Fruit Honey, in 1-lb. screw caps, at 20s. per dozen; ½ lbs. at 10s. 6d. ditto; f.o.r. — SECRETARY, Bee Association, Letterston, Pem.

SELL.—Two small powerful Acetylene Brass Head Lamps, with separate generator, suitable light car or cycle car, £3 the set; Mills' Automatic Acetylene Generating Plant, suitable for 10-roomed house, £6; quantity of Acetylene Gas Brackets and Chandeliers, prices with particulars; all carriage forward.—HERROD-HEMPSALL, Old Bedford Road, Luton, Beds. c.77

MODEL VERTICAL STEAM ENGINE for Sale, cylinder bore 1½ in., stroke 1½ in., slide valve, height 10 in., well made; also piece of 4-in. Copper Tube, sealed both ends, suitable for boiler, 35s. the lot; carriage extra; a bargain.—Box 79a, B.B.J. Office, 23, Bedford Street, Strand, W.C.2. f.141

FOUNDATION PRESS, brood and shallow combined, 40s., delivered; full instructions.—HITCHIN, Marlborough Road, Long Eaton. h.9

SURPLUS DUTCH AND ITALIAN STOCKS, Queens, and large late Swarms from the best honey-gathering and disease-resisting strains; all guaranteed healthy, and headed with 1922 Queens. —Particulars and price to HUDSON, Hayton Smeath, Retford, Notts. r.h.33

SECTIONS wanted. Good price for best quality. —SMITH & CO., Cambridge Street, Hyde Park, W.2. r.g.99

QUADRANT ROADSTER BIKE, 1912 model, good running order, £7, or nearest offer.—L. HAST, Sunny Vale, Alfriston, Sussex. r.h.18

WANTED, small Pump for tank in greenhouse. —Price and particulars to W. HERROD-HEMPSALL, Luton, Beds. f.108

FINEST ENGLISH HONEY, quality guaranteed, in 28-lb. tins, 1s. 3d. per lb.; tins free; f.o.r.—HARVEY, Apiarist, Andover. r.h.76

ITALIANS, strong Stocks, 1922 tested Penna Queens, 6 frames, 50s.; 8 frames, 60s.; carriage paid; returnable box, 10s. Overstocked.—ASTBURY, West Farleigh, Wylde Green, Birmingham. r.g.101

IMPORTED ITALIAN QUEENS, 6s. 6d.; 8-frame Stocks, 45s.—HENSLEY.

BOTTLES! BOTTLES!! BOTTLES!!!—Pound screw top, caps and wads, 29s. per gross.—HENSLEY, Luton Apiary, Chatham. h.94

FOR SAFE WINTERING.—Healthy Stocks in straw skeps with young Queens, 30s. each, carriage paid. Delivery in rotation. Nothing finer for early swarms.—BOWEN, Coronation Road, Cheltenham. h.95

FAMOUS COTSWOLD QUEENS, 9s., per return. Grand value.—BOWEN. h.96

AUTUMN SALE.—Grand opportunity. Healthy Bees on 3 to 10 frames, 20s. to 55s.—HULBERT, Chalet, Warwick Road, Olton, Birmingham. h.97

"W.B.C." HIVES.—Make your own and save money. Simplified Working Drawings, easily understood, 2s. 6d.—CANDY, 28, Dovey Road, Moseley, Birmingham. h.98

HONEY FOR BEE-FEEDING. — Australian, 60-lb. tin, 35s.; 8 lbs., 7s. West Indian, 56 lbs., 38s. 6d.; 7 lbs., 8s.; a cheaper quality, 60 lbs., 30s.; carriage paid; reduction quantities.—LONDON TRADING AGENCY, 32, St. Mary Axe, London, E.C.3. r.h.115

E. H. TAYLOR, LTD., WELWYN, HERTS

The Largest Bee Appliance Manufacturers in Europe.

FORTY PAGE ILLUSTRATED CATALOGUE POST FREE.

BUSINESS ADVERTISEMENTS.

1½d. per word.

THE WISE BEE-KEEPER looks for quality. The South Hampshire Apiaries breed only from the very best strains. Result: Quality and satisfaction. Beginners' Outfits from £5.—All communications, H. E. NEWTON, New Milton, Hants.

ENGLISH HONEY wanted, any quantity. State lowest price.—Box 88, B.B.J. Office, 25, Bedford Street, Strand, W.C.2.

HONEY BOTTLES, 30s. per gross, 3s. per dozen. COBB, 35, Bevan Road, Plumstead. r.h.114

HEALTHY DRIVEN BEES.—Natural Swarms, this season, with fertile Queen, 10s. 6d. per lot, carriage paid; cash with order.—PULLEN, Ramsbury, Hungerford. r.h.101

6-FRAME STOCKS, strong in brood, with young Queens, stores, Dutch, Blacks or Italians, 30s.; crate 10s., returnable; young Queens from 6s., or 10 frames from £2.—SHAW, Morocco House, Kingswear, South Devon. h.84

DRIVEN BEES, 10s. per lot, or 3s. per lb., in your boxes.—DAY, Vine Cottage, Exning. h.104

STRONG, healthy Driven Bees, with Queens, 10s.; Bees on 4 frames, 25s.; carriage paid; boxes returnable.—A. R. MORETON, Hallow, Worcester. h.108

FEW imported Italian Queens, 1922, 5s. each.—COBB. r.h.113

GRAFTON ITALIAN QUEENS. — Fertiles, 7s. 6d.; three, 20s.; return post.—MASOM & HEDLEY, Grafton Regis, Stony Stratford. h.99

WHY PAY HIGH PRICES for Bees to pay for big, heavy advertisements? PULLEN, Ramsbury, supplies good Driven Stocks at 10s. 6d. per lot. See other advt. r.h.101

OVERSTOCKED.—Strong 5-frame Nuclei, 1922 Queens, fine Italian strain, 30s.; box 10s., returnable.—FROST, Sandyford, Stone, Staffs. h.105

TO ALL SECRETARIES and BEE-KEEPERS.—Send to me for samples of Honey for autumn feeding. F. GOODRICH, 10, Weston Park, Crouch End, London. h.106

CARNIOLAN QUEENS by return of post, 10s. 6d.—PEARSON & GALE, Marlborough. h.112

STRICTLY BUSINESS.—The Acarine Eclipse Cartridge, to use in the smoker, at any time, per dozen, 6s., post paid; Flavine—S Bee Candy, 6 lbs., post paid, 7s.—S. H. SMITH, 30, Maid's Causeway, Cambridge. h.23

GLASS QUILTS, 16 in. square, no frames, 1s. each; three, post paid, 5s. Glass Squares for glazing sections, 4s. 6d. 100; quantities less.—SMITH, 117, Great Hampton Street, Birmingham. r.g.105

For best bees, queens and appliances come to PEARSON & GALE, Marlborough.

PENNA QUEENS.

Address:—E. PENNA, Casella Postale 178, Bologna, Italy.

PRICE LIST FOR 1922.

	August.	September.
One Young Pure Fertile Italian Queen	8/-	8/-

SPECIAL OFFERS, until countermanded, for queens in lots of 4 at a time: From August 1st, **£1 4s.** Orders booked in rotation, cash with order, carriage paid, safe arrival guaranteed. Payment by cheques or British postal orders. International money orders are **not** accepted. **10%** discount to Apis Club members on my prices, **except** on "Special Offers."

IMPORTED Carniolan Queens, 8s., August.—B. WOODLEY, Thorne, near Doncaster. h.75

CORNWALL BEE RE-STOCKING COMMITTEE.—For sale, 3 Dutch Skeps of Bees, 22s. 6d. each; 3-frame Nuclei, 15s.; 4-frame, 18s.; carriage paid; boxes charged 5s., returnable.—A. F. KNIGHT, Hon. Sec., Kenwyn, Truro. h.69

FERTILE ITALIAN QUEENS by return (weather permitting), 7s. 6d.; Hybrids, 5s.—TICKELL.

VIRGIN QUEENS, Italian, 2s. 6d.; Carniolan, 2s. 9d.; Golden, 4s.—TICKELL.

CHEAPER than Driven Bees.—Three-frame Nuclei, 22s. 6d., carriage paid; box 5s., returnable.—TICKELL.

CANDY, 7 lbs. 7s. 6d., 10 lbs. 10s. 6d., post free. —JACK TICKELL, Westbourne Apiary, Cheltenham. r.h.71

CHOICE COLONIAL HONEY,
in 56 lb. tins, 55s. cwt. Run Honey and Sections required.
THAMES VALLEY BEES (Regd.),
Teddington, S.W.
r.h.73

QUEENS.—Fertile 1922 Italian Hybrids by return of post, price 8s. 6d. each.—HOSEGOOD, "Beecot," Cliff End, Purley, Surrey. h.s.1

7/- ITALIAN QUEENS, beauties, giving magnificent colonies heavy storing bees.—ATKINSON, Fakenham. r.h.42

"SPLENDID! No swarms from your queens so far," writes Kent client, July 26. 7s. pure Italians.—ATKINSON, Fakenham. r.h.43

BRIG.-GEN. L., June 23: "Queen arrived safely. Looks first class, and very good value for money." August Queens specially fine, secure yours early, 7s. each, pure Italians.—ATKINSON, Fakenham. r.h.44

CHOICEST ITALIAN QUEENS BRED; great workers. "Your queens have done the best of all I have this year," writes N. The Queens up again with my fine Queens, 7s. each.—ATKINSON, Fakenham. r.h.45

AMPLE SUPPLIES of my fine Italian Fertiles, one, dozen, or hundred; quick delivery; satisfaction perfect.—ATKINSON, Fakenham. r.h.46

"YOUR QUEEN has done very well, filling 10-bar hive with beautiful Italians," writes F. Dozens more express every satisfaction.—ATKINSON, Fakenham. 7s. each. r.h.47

1922 RE-QUEENING.—Book early. Sooner done earlier I can arrange to cover all requirements beyond a considerable estimate already fixed These Italians make good.—ATKINSON, Fakenham. r.h.48

STRONG 4-frame Nuclei (1922 Italian Queen), 35s.; choice Queens, 7s. 6d.; returnable box 5s. —HOLLINGSWORTH, Heanor. r.h.49

TORTORA QUEENS.—Address, E. TORTORA, Ozzano Emilia, Bologna, Italy. Special offer for August for no less than two Queen Bees. Special conditions to wholesalers. r.g.91

FOR SALE, two 4-comb Nuclei, Italiane, 30s. each; carriage extra; box 10s., refunded on return.—HERROD-HEMPSALL, Apiary, Luton, Beds. g.112

RE-QUEEN selected Penna Queens, 8s. each, per return. Quantities or booked advance reduced prices.—GILBERT STONE, Chelsea Road, Easton, Bristol. r.h.38

PENNA STOCKS ARE BEST.—Famous 6-frame Stocks headed by young fertile imported Penna Queen, delivered immediately for 40s.; 3 frames 23s.; Cleopatra Stocks at same price.—THE THAMES VALLEY BEES (Regd.), Teddington. r.f.172

FOR THE HEATHER.—Renowned 6-frame "Utility" Stocks at 45s., carriage paid; 10s deposit on travelling box.—LEE, the Beeman Burgess Hill, Sussex. r.g.54

BEES REARED ON ALF. RYALL'S LINES keep well. Buy his advice.

"WIGHT" AND "ACARINE" DISEASES.—Prevention and removal; invaluable advice; 5s. 6d. "An eye-opener."—ALF. RYALL, 8, Ospringe Road, N.W.5. r.c.87

QUEENS by return from April till October.—PEARSON & GALE, Marlborough. w.14

JACK TICKELL.—For Queens, Stocks and Nuclei. List free. — Westbourne Apiary, Cheltenham. r.a.54

DUTCH BEES.—Send for my artistically Illustrated Catalogue outlining my method of managing bees profitably. Read my notes on Queens and Queen Rearing. Will interest the expert and amateur. Free for the asking.—WHYTE, Bee Farm, Cumbernauld Station, Dumbartonshire. r.b.32

HAVE YOU READ "THE BEE WORLD"? If not, why not? Every number in itself is a useful literary work for practice and reference. Specimen copy free.—Offices: THE APIS CLUB, Port Hill House, Benson, Oxon.

GORDON ROWE, 28a, Moy Road, Cardiff, requires gross lots new 1st grade Sections.

PARCHMENT CONTAINERS, stamped "Fine Lemon Curd," offered at half price to honey producers who can affix labels over the printing, 1 lb., 4s. 9d.; ½ lb., 4s.; ¼ lb., 3s. 6d.; ½ lb., 2s. 3d. per 100. Add for carriage 1s. 6d. to each 5s. value ordered. Terms cash.

DAIRY SHOW, LONDON.
OCTOBER 17, 18, 19 & 20.
GREAT EXHIBITION OF DAIRY CATTLE, PRODUCE, APPLIANCES, &c.
Entries close September 4,
or when the entries reach the numbers for which space is available, whichever may be the earlier date.
Particulars of the SECRETARY, British Dairy Farmers' Association, 28, Russell Square, London, W.C.1.

ITALIAN QUEENS by RETURN OF POST. Tested, 9s. 6d.; Untested, 7s. 6d.—PEARSON & GALE, Marlborough.

The Bee-Keepers' Calendar.

AUGUST, 1922

24 Thursday. "Even bees, the little almsmen of spring bowers,
Know there is richest juice in poison-flowers."
Keats, "Isabella."

25 Friday. " . . . . But you, cousin, are fresh and sweet
As the first flower no bee has ever tried."
Tennyson, "Queen Mary."

26 Saturday. "In this hive we're all alive,
Good liquor makes us funny;
If you be dry, step in and try
The flavour of our honey."
Sign of the Bee-hive Inn (Lake District).

27 Sunday. "And hum of bees, inviting sleep sincere
Into the guiltless breast."—*Thomson, "Autumn."*

28 Monday. "Say what you like,
All things love me!
I pick no flowers—
That wins the Bee."—*W. H. Davies, "Nature's Friend."*

29 Tuesday. "A rushy island guards the sacred bower,
And hides it from the meadow, where in peace
The lazy cows wrench many a scented flower
Robbing the golden market of the bees."
R Bridges, "There is a Hill."

30 Wednesday. "The bee-swarms black on the shore,
Which were audible almost,
So black they were."
Meredith, "Daughter of Hades."

Seasonable Hints.

Bee-keepers, like gardeners and farmers, need to look a long way ahead in planning out their work, and as the tiller of the soil is preparing, and sowing for next year's crop, so must the bee-keeper realise that the success or failure of next year depends to a great extent on the work done now. This is the *best time* for replacing worn out or otherwise undesirable queens. In re-queening at this time we are looking ahead, firstly to the new arrival settling down to some work before the winter and populating the hive with young bees that will carry the stock well on into the spring without any "spring dwindling," and, secondly, the young, vigorous queen will be there to commence laying first thing in the New Year, whereas if re-queening is left to the spring it will be late April under the most favourable conditions before a young queen can be procured and introduced, and up to that time the colony will be handicapped by the presence of the old queen.

Queens should be kept laying for another week or two, by stimulative feeding if necessary.

Another important point is that bees should be packed for winter in a healthy condition. If there is infection of any brood disease in the combs the spores will surely come to life as soon as brood rearing commences in the New Year, and long before the bee-keeper can examine the combs and detect the trouble. Any suspicion of these diseases should be dealt with, and it will pay in the long run to do it drastically. It will be much cheaper than wasting time and material on attempting to winter worthless colonies.

It is also better to destroy colonies affected by acarine disease than attempt to winter them, as they are almost certain to go under, some time before or early in the spring. The difficulty to the average bee-keeper is to know if infection is present, as when the symptoms that he can see and recognise show themselves—that in the crawling bees, etc.—the disease is far advanced. To make fairly certain that a colony that is apparently free from acarine disease is so in reality it is necessary to make an examination of a number of bees with the aid of a microscope, but the average bee-keeper does not usually possess either a microscope or the skill to use one. A few days ago we had the pleasure of a visit from Col. Samman, Kirriemuir Apiary, Stillorgan Park, Co. Dublin, and talking of the importance of wintering only healthy colonies, not only on the ground of the loss to the individual bee-keeper, but also on that of checking and preventing the spread of disease, he asked us to make known that he will be pleased to undertake this examination for the detection of any disease of either brood or adult bees *free of charge,* but a *stamped* addressed envelope *must* be sent for reply. Bees from either apparently healthy or suspected colonies may be sent, and from a dozen to twenty should be sent, preferably in a small tin box or a match box. It is useless sending in an envelope a couple of bees, which arrive in a flattened out condition. It is better to send live bees, and *no liquid food of any kind should be put in the box with them.* Bee-keepers wishing to avail themselves of this generous offer should send to Col. Samman at the address given above.

Bee Sting.

Hail! bonny work of Nature,
A bee-borne flood aloft!
Hail! cells, by hand unlabour'd,
Self-jointed, waxen, soft!
Free-gift to man, for nurture,
Demanding neither spade,
Nor hoe, nor yoke of oxen,
Nor crooked sickle's aid.

—Translated by G. R. Woodward, M.A.

Visits to the Violet Farm.

It is always a pleasure to read Mr. Kettle's article in the British Bee Journal, and having chosen Bournemouth as my holiday haunt this summer, the propinquity of the Violet Farm induced me to write to the owner and arrange a meeting. This having been fixed up, one afternoon saw us, i.e., myself and wife, in our G.W.K. on the road to Corfe Mullen. Passing out of Bournemouth viâ Winton, we soon reached Wimborne, and then in a few minutes our destination.

Mr. Kettle had just returned from a County Council meeting. He gave us a hearty welcome and at once suggested a survey of what I shall call the Home Farm, situated at the back of the house. There we saw line upon line of currant bushes, Boscoop Giant black, Lloyd George raspberries, pear, apple, and plum trees. The black currants had been picked, but it would be hard to find a better show of fruit, especially plums and pears, though I believe this is a record season for the former. Violets were also grown, but not in such profusion as in another part of the farm.

Mr. Kettle has evolved, or rather the bees have evolved for him (by cross fertilisation), a new violet, for which he has a great demand. It is a large single mauve flower with a white eye; there were a few out in bloom. He also cultivates the largest raspberry I have ever seen, almost as large as a loganberry, conical shaped, and of good flavour. He has christened it the "Lloyd George." He showed me one very large order which he had received for this speciality, which, if my memory serves me, ran into thousands. I at once ordered a small quantity myself. Another novelty to me was a long row of bush vegetable marrows, which grow some 3 or 4 ft. high, and do not trail in the slightest. They turn off immense crops. The Bournemouth shops catering for the holiday folk absorb a good deal of Mr. Kettle's produce, which he sends in by motor lorry, the flowers going to London.

We now adjourned to the house for tea, Miss Kettle dispensing hospitality in the absence of Mrs. Kettle, who with the rest of the family had gone off in their car to spend the day by the sea.

After tea we were taken to the front and introduced to the home apiary, located in a small enclosure between the house and the road. I did not count the number of stocks, but there must have been some twenty or thirty here and about fifty at the out apiary. And what a hum there was! And what a height some of the hives were, being supered with two or three brood chamber boxes for extracting. Being a warm afternoon the bees were crowding in over the hedge laden with nectar from the bell heather and ling near by, the latter already in bloom. They were in a happy frame of mind, and did not resent our presence, though we were continually walking in front of the hives.

I saw no trace of disease either in this or the larger out apiary. Mr. Kettle agrees with me that Flavine, if used in time, will keep it under, and even get rid of Acarine disease.

Nearly all the bees are native blacks or hybrids, with a few Italians. Mr. Kettle has been troubled, as we all have this year, with excessive swarming, but he has turned his swarms to good account. One swarm in particular in three weeks had filled up the brood chamber and was finishing off a super of sections. A small observatory hive containing two brood combs, with a few sections on the top, was next examined. We soon spotted the queen, a young one, busy over her business of oviposting. A queen cell was being prepared, but the stock not being overcrowded, and the season being mostly over, it would probably not be developed. All the hives and supers are of home manufacture, made from sugar boxes, packing cases, etc.; the only things bought are frames and sections. Mr. Kettle is strong in his advocacy of supering with brood frames in place of shallows, and the reasons he gave me have converted me to his point of view, and I shall for the future to a great extent adopt the plan.

We were now conducted by a path (through the heather), slightly uphill, which gave delightful views of the surrounding country and the far distance, to the glass houses. There were five of them, 100 ft. long, devoted to the cultivation of tomatoes, grown and trained, I should say, to perfection, showing tremendous crops. Mr. Kettle pays the man who looks after this part of the farm as much as 50s. a week. Outside the houses were sweet peas, asters, etc., all cut for market.

We had not time to see another part of the farm, managed by Mr. Kettle's two sons, where thirty cows are kept. This part is rented.

Living as I do in the Teme Valley, Worcestershire, where the soil is so rich it will grow any sort of fruit, it is a marvel to me what Mr. Kettle has done at the Violet Farm since 1905. He began by reclaiming the heather, and bringing it under cultivation single-handed. He has now a profitable apiary and fruit farm, which he owns. He started with £30 in his pocket; he is now a well-to-do man. Ambition and industry are the secret of his success. As I write, a letter comes to me from Stanford from the schoolmaster, to say that he has hived a swarm for me in my absence. The swarm and skep weighed 14½ lbs., weight of swarm 11 lbs. Is not this a record, Mr. Editor?—E. H. Oldham.

I am sure, Mr. Editor, many of your readers who cannot get to see the home, or writer of the splendid yarns we get from Dorsetshire, will be glad to have a brief account of a flying visit. Arriving at Broadstone Station, L. and S.W.R., half an hour's delightful walk brought me to the home. No mistaking it when you are confronted with the notice board:—

VIOLET FARM.
Fruit. Flowers. Honey.
Proprietor—J. J. Kettle.

The first visit was to the bees, in full swing storing the precious nectar. Not all were doing well. Where's the apiary where they do? Judging, however, from the wealth of bloom of such varieties, also the quantity of fruit trees, it must be an ideal place for *Apis mellifica*. Taking, however, such a delight in fruit-growing, I naturally wanted to see where the bees were "singing all day long" in the gooseberry bushes, as friend Kettle sometimes writes; and how well he hits it off, for here success was very apparent. There were not odd trees, or odd rows, but row after row; to my thinking, quite 150 yards long of gooseberry, currant, strawberry, violets, asters, and also raspberries, which our friend is so proud of, and rightly so, for they appear to be a wonderful cropping variety. All those were interspersed at suitable distances with apple, pear and plum trees in full bearing, and all *produced* (not bought) by friend Kettle.

After tea, mine host took me to his other plantations. Bees here also. The last place visited was to me a marvel in respect to what labour and perseverance can do. There are strawberry beds, violet beds, rasps, asters, antirrhinums, and glasshouses—each one producing over two tons of tomatoes last year. This delightful oasis was broken up from the wild scrub, heather and gorse of the hillside, and was, indeed, an object lesson as to what can be done; for it was here, sixteen years ago, our friend made a start by purchasing a few acres at £30 per acre, working formerly as a local gentleman's gardener at 27s. per week, since when he has brought up a family of seven or eight respectable, healthy children, starting the eldest on a farm he has bought, in addition to his own house and fruit gardens. I was astounded at the success so well and deservedly accomplished, and had the impression that instead of a "Violet Farm" it was more of an "Industry Farm." In addition to all these duties, our writer finds time to do his duty to the State by attending political meetings and being a County Councillor for seven or eight parishes. Work! Oh yes, but he is lucky to have strong, willing sons now who watch he does not do too much. Long may he live to enjoy the fruits of his many labours, and send us delightful articles anent "where the bee sucks" I am sure will be the wish of many. H. Hill.

Ockbrook, Derby.

Week-End Bee-Keeping

By S. H. Smith.

(*Continued from page* 400.)

These short methods of queen introduction are all right "D. B." during glorious weather like this, while a flow is on and with young bees, and there are many other equally safe and effective ways. But you must first

sense the right time and season, and to do that you must understand something of bee behaviour. That comes to some after observing and manipulating bees during a few seasons, but it is not given to everyone to enter into the spirit of the hive or into the life of any of the insect tribe.

As the population of Hive No. 1 is considerably reduced, the other two section racks will give the bees enough to work on until we add the two supers and their bees from the sold stocks. We will place the newspaper as we did when we introduced the clipped queen. Better have your veil ready "D. B.," there may be some unpleasantness when we brush the bees off the unsealed combs. That wild parsley in the hedge will make a couple of soft, serviceable brushes.

We remove the top brood chamber and place it on a lift, drawing the carbolic cloth over the excluder on the lower brood-chamber. In a few seconds we may take it off and put the two section racks in position. The carbolic cloth now replaces the quilts on the removed brood-chamber, and those quilts go on top of the sections. The bees are wonderfully quiet and run in readily. There was no need for veils, but I could tell you of some bad mistakes I've made at times in misjudging the temper of bees. As the combs are brushed we put them back into the brood-chamber. The lifts are replaced, on goes the roof, and Hive No. 1 is closed and ready for business.

Those sections are beautifully fitted with foundation, every one is right side up, and the springs are adjusted perfectly. Oh! I might have guessed it—your wife and daughters are most neat and dainty workers. It is encouraging to find all the family interested in our little venture. Those sections are eloquent.

The brushed combs now go on Hive No. 2, and it is back again to a three-story formation. Though minus a number of bees, in another ten days, when the brood emerges, it will be humming with life again.

May 31st I'll bring along two 8-frame travelling boxes, and the two stocks will leave Cambs. that evening by passenger train and arrive at their destination June 1. Imagine yourself to be the recipient of an 8-frame bee stock, "D. B." Just what would you do in such a case?

"I'd place the travelling box in a dark room until evening and then put it on the floorboard of the hive the bees are to occupy. The entrance would be opened and the bees allowed to fly. Some covering would go on the top of the box and the hive roof would be put over it.

"Next day the bees would be allowed to get acquainted with the neighbourhood. The following day I'd transfer them into their new hive, weather permitting, about the middle of the day. Each comb would be carefully examined, the queen seen, and two drawn out combs or two frames of foundation would be placed on each side to fill up the brood-chamber.

"I should then put back all screws, reverse the label, and return the box, carriage paid."

"My word! You take my breath away 'D. B.' You have studied the book to some purpose. But I knew it from the start. I am proud of my partner. Half the time there has been no need to tell you what to do, you were doing it understandingly. You have not had much of a chance to get in a word, but your silence has been delightfully sympathetic and companionable."

"There seems to be poetry as well as profits in bee-keeping, 'Week-End.' I have enjoyed my initiation, and if at times I've absorbed bee-knowledge painfully through my skin it was well worth it. All the family are willing to listen to all the bee-lore and other mysteries you care to hand out. Like myself, Mrs. 'D.B.' has not said much, but if those sections spoke to you then possibly you have sensed in her silence a murmuring melody, a lilting lullaby."

"Back to the apiary, 'D.B.' After to-day we may take it easy and await the honey harvest. Once a week or so we shall add a super or take away a rack of sections. If this weather keeps up I think I can promise you a fine section for your tea-table the day we send away the two beestocks. Eaten warm from the hive section honey is a delicious morsel. Altogether the prospects are 'set fair,' and we may bank on as good a dividend from our honey crop as we shall get by selling bees."

About this afternoon. If you can be at my apiary at 3 p.m. we can super some stocks and look over some skeps that came in from the Fens this week. Up to 1916 the Fen farmers tumbled all over themselves to bring in good skeps of bees at ten shillings each. To-day they ride in motors and come to town in evening dress. The war made them rich.

If you went to buy a skep you would have to hunt one down, carry it yourself over fields and ditches, and cart it home. For these privileges you would pay down on the nail £2 cash. You would really have to make two trips, one to skewer the combs, and the other to bring away the skep. Figure all this out in time, labour, and petrol, and you will not wonder that I did not enthuse when you mentioned skeps.

No—no—the Fen farmers did not get rich by selling bees. Their lands are highly productive, and their farms are large. The war acted as a tariff, and while it lasted, agriculture reaped the benefit. We are slipping back into the old pauperism because we can't see that our vital industries need protection.

(To be continued.)

Norwich Notes and Notions.

How are the bees? This is the word of greeting one gets whether walking, cycling, or in a train.

One exclaimed to me, in pointing to some lovely wayside flowers, "What a dream!" I said it was a blooming reality, and a nightmare for the bees.

This looks like being a deficit year. The greatest joy of the year for me is some fine painting from an artist bee-man at King's Heath, a lover of Nature of the right kind.

Queens being so long in mating, many may think the stock queenless. A comb of eggs usually keeps the bees from swarming, also acts as a tester. This year a comb of eggs inserted into a nucleus meant building another batch of queen cells and a swarm, also the bees taking a trip with a virgin on a wedding flight. These happenings are a source of worry to a busy person away from the bees. I mastered this by slow feeding. Many make a great mistake by hiving every swarm, from a pint or more of bees, in another hive, instead of putting them back. The result is small swarms, not being properly provided for by the way of a comb or two of stores lose heart and develop to a miserable lot, sometimes decamping. The parent stocks suffer, too, by the way of chilled brood, the result of cold nights, with not sufficient bees to provide the necessary warmth.

No; don't count the glories of bee-keeping by the numbers of hives one can pitch bees into, but by a few rightly-managed stocks. One consolation is the herbage looking so well bees stand a good chance of doing well next season. If the drought had continued it would mean disaster in the end. So ends a season promising at the beginning, only to end in a most trying season for myself and others. Otherwise, stocks are numerous and healthy.

A. TROWSE.

51, Eade Road, Norwich.

South Staffordshire and District Bee-Keepers' Association.

The fourth outdoor meeting for this year of the above Association was held at Mr. A. Cheshire's apiary, Coxley, on Saturday, July 29, 1922.

There were about 70 members and friends present. Mr. Edward Davies, of Whellington Hall, Stourbridge, presided, and in introducing the lecturer, Mr. W. Herrod-Hempsall, said he was pleased with the number of bee friends present, which showed their interest in bee culture and the work of the Association. He was pleased they had so able a lecturer to listen to, and hoped they would all benefit thereby.

In the course of his lecture on "Queen Rearing and Introduction" the lecturer gave many important suggestions, and said amongst other things, select your stock to produce queens, think at least twelve months ahead, decide what stocks you require for swarming or extracted honey, breed for docility, for good working qualities, combined with constitution, and get stocks strong at the right time. Colour makes but little difference to the working quality, but has a certain commercial value. Study the drones equally as well as the queen; the drones give disposition, the queen constitution. The best queens are raised under the natural impulse. Queens reared by grafting are not so good, and should not be reared from mothers less than two years old. Requeen every autumn, but keep your breeding stocks longer. Strain is a valuable asset. In rearing drones make provision early, and see that only your selected colony has drones. To produce colonies for honey production, stimulate with the object of getting the queen to lay more eggs. The division board should be used to retain the heat. The division board saves the food bill. Introduce queens either by (1) direct method or (2) cage the queen, with a few attendants with her. Bees recognise each other by scent. Re-queen immediately after the honey flow. Introduce the queen to young bees preferably, and unite later.

Following the lecture a number of questions were asked by various members of the meeting, to which suitable replies were given.

A vote of thanks was passed to the lecturer.

A very substantial tea was provided by Mr. and Mrs. Cheshire, and served in a very able manner.

Mr. Cheshire afterwards gave a demonstration in frame making.

A resolution was passed that the hon. secretary (Mr. W. J. Walton) write to the Stafford County Agricultural Committee asking that arrangements be made, if possible, for Mr. Joseph Price, county expert and lecturer, to be at liberty to attend the summer outdoor meetings of the Association, seeing the number of members attending these meetings, a great opportunity presents itself for giving advice and instruction in bee culture by the expert.

Votes of thanks were passed to Mr. Davies for presiding, and to Mr. and Mrs. Cheshire for the excellent tea provided and the arrangements made for the meeting.

(*Communicated.*)

Fifeshire Bee-Keepers' Association.

On the invitation of Mr. and Mrs. James Melville, of Balmullo, the Leuchars Branch of the Fifeshire Bee-keepers' Association held a conference at Balmullo House, on Saturday afternoon, August 12. Mr. C. Henderson, J.P., President of the branch, introduced Mr. W. Langlands, Dundee, who gave an interesting and most instructive demonstration of bee-keeping apparatus, showing the construction of the modern hive, making frames, sections, etc. Mr. David Landale moved a hearty vote of thanks to Mr. Langlands.

Tea was served by Mrs. Melville.

Mr. D. M. Rollo, Hon. Secretary of the Fifeshire Bee-keepers' Association and of the Scottish Bee-keepers' Association, in reply to a query as to the treatment of Isle of

Wight disease, referred to the successful result of an experiment initiated by Mr. Murray, of the East of Scotland Bee-keepers' Association, in the use of the essential oil of peppermint in combating the disease. Many hives badly affected with "crawlers" had by this treatment been restored to active life. Some hives had swarmed and were gathering honey, and showed no further signs of disease. This experiment was on its trial, and no one suggested it was a cure, as a great deal had yet to be learned as to the effect the oil had on the stock, but so far it was encouraging.

A hearty vote of thanks was accorded Mr and Mrs. Melville for their kindness and hospitality.

In the honey competition prizes were awarded as follows:—For Three 1-lb. Jars Extracted Honey—Mr. John A. Rollo, Wester Forret, and Mr. William Reid, Balmullo (equal.) For Three 1-lb. Sections —1, John A. Rollo; 2, James Melville. An exhibit of straw skeps made by Mr. Simpson, a member, was much admired. Messrs. Steele & Brodie also showed a display of apparatus.

(Communicated.)

Glastonbury and Street Bee-Keepers' Association.

At the annual meeting of the Glastonbury and Street Bee-keepers' Association at Portway House, Street, on July 29, Commander R. D. Graham, on taking the chair, expressed regret for the loss bee-keepers felt in the death of Lieut.-Col. Jolly, who presided at the annual meeting at Street last year.

Owing to the poor honey season it was decided not to give any prizes at the local flower show this year; but anyone who had honey ready was encouraged to exhibit, the committee having arranged that staging should be provided.

The Secretary's report estimated the bees in the district within six miles of Street at 190 stocks, compared with 117 last year. The great increase is partly owing to extravagant swarming, and partly to the decrease in disease, the latter indicating brighter prospects for bee-keeping in the future. There had been more than 50 swarms during the season, and in addition about 20 stray swarms had been reported flying over. Several bee-keepers had been the losers by their swarms flying away, and several had been gainers by stray swarms coming to occupy their empty hives. Some of their old members who lost all their bees with Isle of Wight disease some years ago had again started with stray swarms, and it was a pleasure to see their empty hives occupied again and to hear the hum of bees in their gardens.

Extracted honey is selling this year at 1s. 8d. a lb., as compared with 2s. 3d. last year. Sections are scarce and are being sold at from 1s. 6d. to 2s. 6d. each. The best yield from one hive locally this year is 90 lbs. of honey, compared with 148 lbs. the best for last year. The average surplus for each hive this year will probably be about 12 lbs. Isle of Wight disease is still with us. There have been several cases in two villages about four miles from Street. Diseased bees were brought to the neighbourhood two years ago. They interbred with stocks around, and the disease spread. It would be advisable that all suspicious stocks in the infected area should be destroyed; but unfortunately we have no Infectious Diseases Act applying to bees, and so the disease remains in our neighbourhood. Reports this year from many members tell of swarms, any amount, "but mighty little honey." Fortunately, hope springs eternal in the bee-keeper's breast, and we look forward to a better season next year.

The balance-sheet for 1921 showed subscriptions £2 15s., expenses £1 18s. 8d., leaving a balance of 16s. 4d., which was sent up to the County Secretary.

The officers were all re-elected, and thanks for their past services was passed.

The Somerset Bee-keepers Association having made the minimum subscription 5s., members of this branch consider the amount too high, and a resolution was proposed by Mr. Harry Underwood, seconded by Mr. S. Callow, and carried unanimously, that the local hon. secretary be instructed to write to the Council of the Somerset Bee-keepers' Association requesting that Associate members for this branch be permitted at a subscription of 1s. 6d. each, provided that the quota of 1s. 6d. a member to headquarters be maintained.

Votes of thanks brought to a close this most enjoyable gathering, which included a pic-nic tea of bee-keepers.

(Communicated.)

Sheffield and District Bee-keepers' Association.

In spite of adverse weather conditions, a goodly number of the members of the above Association responded to an invitation given by the President, J. H. Richardson, Esq., to visit and inspect his grounds and apiary at Ridgeway on Saturday, July 1. The lady members were well represented, but several prominent male members, owing to tragic and other exceptional unforeseen circumstances, were unable at the last moment to accompany the party.

After a journey by car and bus, the party were welcomed by Mr. Richardson, and strolled round the grounds to the apiary. This was well located in a snug corner with a fine natural wind-break provided by majestic copper beech, sycamore, weeping willow, and other trees, the bees having access to a good forage ground, chiefly provided by white clover.

The weather being so unfavourable, a cold wind blowing with intermittent showers, it was wisely decided to inspect only one colony, and there being many present who

were new to the craft, Mr. Irwin Packington kindly consented to give an impromtu lecture and demonstration. In a speech which was a model of clarity, he dealt with the elementary history and manipulation of the colony, enlarging on the manipulations rendered necessary, in the interests of the colony, by the abnormal weather conditions prevailing this season. The colony chosen proved a happy selection, it being in the interesting condition of making preparations to swarm, queen-cells in various stages of construction being revealed, one containing an egg but a day or so old. The bees were in excellent condition and would evidently give a good account of themselves in the matter of surplus, providing weather conditions improved. The apiary, generally, bore every sign of intelligent and thorough attention. Master Arthur Bashforth ably assisted the speaker in the manipulations.

Rain intervening, the company adjourned to the house for tea, kindly provided by Mr. and Mrs. Richardson, the members very much appreciating the homely solicitous attention of their hosts. Some of the friends took the opportunity of inspecting evidences of Mr. Richardson's sporting skill, amongst which a freak of nature, a white "blackbird," and a particularly fine head of a badger attracted much interest.

A pleasing feature of the gathering was the re-appearance of old members who temporarily had been in the ranks of the D.B.'s (discouraged bee-keepers) owing to losses sustained by Acarine disease, but whose interest and enthusiasm had revived, and who, with the characteristic optimism of the true bee-keeper, had obtained, or purposed purchasing, fresh colonies, looking for better times.

The hon. secretary, Mr. W. Garwell, reported that the Association now boasted a membership of 76, and that each meeting was recording additions. In view of the fact that the district was considered to be largely industrial, and not pre-eminently adapted to bee-keeping, this was thought to be very creditable. Its industrial character notwithstanding, Sheffield possessed in its environs some excellent forage grounds, the quality and quantity of the nectar being not to be despised.

In spite of failing light a souvenir of the visit was secured in the accompanying photograph, in which Mr. Richardson is seen on the extreme right of second row, with the hon. secretary immediately before him in the front row, and Mr. Packington (with hat on) the central figure at the back. P. R.

A GROUP OF SHEFFIELD BEE-KEEPERS.

To a Bee.

Sign of fitful blosmy Spring,
Bee, begirt with golden wing,
Mad for love of ripest flowers,
Flitting after scented bowers,
Toil, until thy waxen home
Teems with miel and honey-comb.

NECIAS, of Miletus, physician, scholar, poet, and close friend of Theocritus, c. 280 B.C. Translated by G. R. Woodward, M.A.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real name and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

Prices of Appliances.

[10677] As this is a matter which occupies a good deal of my attention, I venture to think that my point of view may be of interest to some of your correspondents.

That prices of appliances are bound to be still considerably above pre-war level seems to me inevitable; but, as I read it, the point at issue is not as to whether prices are high, but as to whether the manufacturers are getting an unreasonable profit, and it is with this assumption, which I believe to be an erroneous one, that I propose to deal.

I do not intend to produce detailed figures, as it is so easy in quoting figures to get them out of proportion and so unwittingly draw conclusions which through being incomplete do not represent the facts under discussion. As an illustration of this I will take those quoted a few weeks ago. Of the list which was taken the majority happen to be appliances of which the values and quantities sold are relatively small. If those articles had been taken which form the main part of a manufacturer's turnover, different results would have been reached. For example, in the case of hives and foundation (two of the most important items) the increases of prices quoted by my own firm are 130 per cent. and 40 per cent. respectively, and, in any case, percentage increases are nothing to go by, as it does not at all necessarily follow that profits have increased correspondingly.

The main points I wish to make are that, like others, we were caught in the vicious circle of rising prices, that the earnings of the average manufacturer are not high, and I would go further and say that, judging from those whom I know, I believe many of the manufacturers are not out solely for their own ends, regardless of the interests of the bee-keeping industry.

As an illustration of this I will mention the case of one manufacturer, who is a County Councillor lecturer, and whom I have heard lecturing to beginners, and showing them how to start cheaply by making hives out of packing boxes! Another illustration of the same spirit is to hand in the last sentence of Mr. Meadows' letter, "Beginners must practise the advice of our late Scotch friend, Mr. Raitt, 'Make haste slowly.'"

Now as to prices. There are, of course, many other factors entering into these besides profits, and I should like to mention one or two. I do not wish to attach undue importance to them. Of course, the main costs are bound to be for materials, and the work put into them, but some of these other things (generally known as "overhead charges") do make an appreciable difference.

During the war many of these overhead charges, machinery repairs, catalogues and printing, packing materials, etc., etc., rose considerably, but, on the other hand, there was a tendency for any stock left over from one season to be worth more the following season. After the war there was no compensating factor of this sort, so that the whole cost of the increased charges had to be covered by the selling prices.

Another important factor is that the demand for appliances varies enormously according to the weather conditions of each particular season, and for a variety of reasons this frequently results in relatively large stocks having to be carried through the winter. During the period of rising values materials were so difficult to obtain that this factor did not apply, but it is now operative again, and in a time of falling values may have an influence on prices.

There are many other points I might take, but I do not wish to trespass on your courtesy by taking too great a space, and also I do not wish to unduly emphasise the one side. That there are things to be said on the other side I have no doubt, but when due allowance has been made made for them, I believe it will still be found that all things considered manufacturers are not making unreasonable charges in return for their services.

E. Graham Burtt.

Prices of Bee-keepers' Supplies.

[10678] Having read letters on both sides, I am still convinced that the prices of the big necessaries of the average bee-keeper are very much too high, and keeping very many from developing their apiaries as they would do if supplies were at a fair price, which to-day they are not. Competition seems eliminated. Take up whose catalogue you like, each maker's prices are so similar that one is forced to the conclusion that there is a "ring" among the manufacturers to bleed the bee-keeper.

Now I happen to have catalogues for some years past, and to bring the matter into a very easily grasped condition I give herewith prices of a prominent purveyor, past and present, I say nothing of carriages, except that in the past consignments of £2 were carriage paid, to-day they are not:—

	PAST PRICES	TO-DAY
	100	100
Sections	2/9	11/6, 12/6
Shallow or Standard Frame	8/6	25/6
Foundation	1/10 } per lb.	3/2, 3/4 } per lb.
Super	2/6 }	3/10 }
Hives with rack of 21 Sections 14/6 to 22/6 each.		32/- for much worse made article to £5 5 and upwards.

Now, these prices are four and five-hundred per cent. rise. I venture to say that manufacturers evidently think as the Government do about whisky and tobacco, that they are luxuries and productive of evil, and consumption must be curtailed by high prices.—ERNEST WILKINS, Hare Court, Wantage.

Excessive Swarming.

[10679] May I ask whether your readers have experienced, as I have in my small apiary, the excessive swarming fever? In spite of ordinary preventive methods, all my stocks have swarmed between May 20 and July 10, some twice, while it has been difficult to estimate the number that have passed by, many finding a permanent resting-place in trees. Besides this swarming fever the bees have failed in all the supers to cap more than seven or eight sections, and those not always in the centre. One of my supers has been in over a month, and this in a district in which there is a rich harvest, the bees have filled it continuously, there is honey in all the sections, but very few are sealed. One more point—what is the meaning of the number of dead bees under the hives?—AN OLD BEE-KEEPER.

[Many bee-keepers make the same complaint of excessive swarming. No doubt it is in a great measure due to the season. We cannot account for the dead bees without further particulars.—ED.]

Bee Shows to Come.

A nominal charge of 2s. 6d. is made for notices (not exceeding 7 lines) in this column, 10 lines charged 3s. 6d. up to 15 lines 5s., which covers cost of insertion from order till date of show. Cash should accompany orders for insertion.

August 26, at Hinckley, in connection with the Hinckley Sweet Pea and Rose Society's Annual Show.—Open to all bee-keepers. First prize, 12s. 6d.; second price, 7s. 6d.; and third prize, 4s.—Schedules are ready, and may be obtained by sending stamped, addressed envelope to the Hon. Secretary, A. Kimball, 119, Clarendon Road, Hinckley, Leicestershire. **Entries closed.**

August 30, at Chester.—Cheshire B.K.A., in connection with the Cheshire Agricultural Society's Show. Open and County Classes. Good prizes. Send one jar to Gift Class for Chester Hospital.—Schedules from T. A. Beckett, Saint Werburgh Chambers, Chester.

August 31, 1922.—Winchester Domestic Live Stock Association Show. Schedule of Honey Classes Open:—Class 5, one shallow frame; Class 6, six sections of 1922 honey; Class 7, six 1-lb. screw stoppered bottles of 1922 honey; Class 8, trophy of bee products to be arranged on table space 3 ft. by 3 ft.—Entry Forms to be obtained from M. W. Castle, 60, High Street, Winchester.

September 2, Corn Exchange, Rochester.—Medway and County Bee-keepers' Association, in conjunction with the Allotment Holders' Vegetable, Fruit and Flower Show. Eleven Open Classes, including trophy, for which a silver cup is offered. Entry fee for open classes, 1s. each.—Schedules from Mr. A. R. Castle, Y.M.C.A., Maidstone Road, Rochester. **Entries closed.**

September 2.—Peterborough, Oundle and District Bee-keepers' Association. Show of honey, Co-operative Hall, Peterborough. Members and Open Classes. Open (entry fee 2s.), 12 bottles Extracted Light Honey, first prize, £1 10s.; second, £1; third, 10s. Gift Class (entry free). Bottle Extracted Honey to be sold for N.U.R. Orphan Fund. First prize, W.B.C. hive; second, Appliances 15s.; third, 7s. 6d.—Schedules and Entry Forms, G. H. Seamer, Hon. Sec., Waterloo Road, Peterborough. **Entries closed.**

September 2.—Middlesex Bee-keepers' Association, in conjunction with the Fête in aid of Hospital. Show of Honey, Wax and Appliances. Open Classes for shallow frames, sections, and extracted honey.—Schedules and Entry Forms from Mrs. Hodson, Harley Lodge, Private Road, Enfield.

September 6 to 9, at Moor Park, Preston.—Royal Lancs. Show. Seven Open Classes.—Schedules (please state "Honey") from Reg. O. Bradbury, Secretary, Derby House, Preston. **Entries closed.**

September 9.—Middlesex Bee-keepers' Association, in conjunction with the Brentford Allotments Association Annual Show, at the Wesleyan School Hall, Clifden Road, Brentford. Twelve Open Classes for Honey, Wax, etc.—Schedules and Entry Forms from R. R. Babbage, 33, Whitestile Road, Brentford, Middlesex.

September 13, at Twickenham.—Twickenham Horticultural Society's Vegetable Exhibition. Honey exhibits under the control of Twickenham and Thames Valley B.K.A. Open classes for single jar and section.—Schedules from Miss M. Byatt, "Hawthorn," Hanworth, Middlesex. **Entries close September 8.**

September 14 and 15, in the Cattle Market, Newport.—Newport Allotment Holders' Association Utility Show, in connection with the Mon. B.K.A. Open Classes for Honey.—Hon. secretary, Mr. J. K. Price, 37, Courtybella Terrace, Newport (Mon.)

September 16.—Moseley and King's Heath Horticultural Society and South Staffordshire Bee-keepers' Association. Five Open Classes for sections, light and medium honey in jars, also beeswax. Several Local Classes.—Schedules from H. C. Weston, 37, Pineapple Road, King's Heath, Birmingham.

September 16 to 22.—British Bee-keepers' Association Annual Show at Grocers' Exhibition, Royal Agricultural Hall, Islington, London.—Schedules from Hon. Secretary, B.B.K.A., 25, Bedford Street, Strand, London, W.C.2. **Entries close certain September 4.**

September 21 and 22.—Herts County Bee-keepers' Association, Barnet Branch, in connection with Barnet Allotment Holders' Association's Show. Open Classes for 3 1-lb. Bottle and 3 1-lb. Sections, first prize 20s., second prize 15s., third prize 10s.—Schedules from Norris S. Toms, 60, Fitz-John Avenue, Barnet, Herts.

September 27. — Altrincham Agricultural Society. Largest one-day show. Several Classes for honey, etc., both open and local. Good prizes. Send one jar for Gift Class, to be given to Hospital.—Schedules from H. Turner, 1, Market Place, Altrincham.

September 28, 29, 30.—Kent County and Western Divisional Show at the Crystal Palace. Open Classes to United Kingdom (12 classes), Honey, Wax, Mead, Novelty, Scientific.—Schedules from Hon. Show Secretaries, W. E. Clifford, Southlands Road, or E. R. Seadon, Stanley Road, Bromley, Kent.

October 4 and 5.—The Society of the Four Northern Counties limited to Cumberland, Durham, Northumberland, Westmorland, Congress and Fruit Show, also Bees and 15 Classes for Honey, to be held in the Market Hall, Kendal.—Schedule for Honey Section from G. Chatham, 18, Stramongate, Kendal. **Entries close September 27.**

October 12, at Ongar, in connection with the Ongar and District Agricultural Association.—Extracted and Comb Honey. Open to Essex.—Schedules from G. A. Taylor, Hon. Sec., Ongar and District Bee-keepers' Association, Ashcroft, Ongar.

Special Prepaid Advertisements

One Penny per Word.

Advertisements must reach us NOT LATER than FIRST POST on MONDAY MORNING for insertion in the "Journal" the same week.

Trade *advertisements of Bees, Honey, Queens, and Bee goods are not permissible at above rate, but will be inserted at* **1½d.** *per word as* **"Business"** *Announcements, immediately under the Private Advertisements. Advertisements of Hive-manufacturers can only be inserted at a minimum charge of 6s. per 4in., or 12s. per inch.*

PRIVATE ADVERTISEMENTS are only intended for readers having **Surplus Stock** *to dispose of.* **Driven Bees, Nuclei,** *and* **Queens that are reared or imported for sale,** *are Trade Advertisements, and can only be accepted under trade terms. A charge of 6d. extra per insertion will be made if a box number is used.*

Orders for three or more consecutive insertions in "The Bee Journal" entitle advertisers to one insertion in "The Bee-Keepers' Record" free of charge.

We will advertisers please read these Rules carefully in order to save trouble, as they will be strictly adhered to?

PRIVATE ADVERTISEMENTS.

THREE Swarms of Bees in straw skeps, combs drawn out, 25s. each, carriage paid.—LONGLEY, 35, Tharp Road, Wallington, Surrey. h.116

WHAT OFFER for BRITISH BEE JOURNAL, seven bound volumes, Nos. 38 to 44, excellent condition, and full Sectional Drawings, by Gee, of Whitfield, for making W.B.C. hive?—SUMNER, Chapel St. Leonards, Lincs. h.117

PURE LINCOLNSHIRE HONEY, 28-lb. tins, £7 10s. per cwt., carriage paid; sample 4d.—THOMPSON, Helpringham, Sleaford. h.119

PURE Extracted Hampshire Honey, in 28-lb. tins, £6 per cwt.; tins free; carriage paid.—GOODLAND, Chilbolton, Stockbridge, Hants. h.120

GARDENER (Under) wanted to look after herbaceous borders, lawns and rose garden; one with knowledge of bees preferred; 33s., with bothy, coal and light.—Apply, giving age, experience and references, to J. T. MCLAREN, JUNR., Saltoun Estates Office, Pencaitland, East Lothian. h.123

FOR SALE or exchange, Extractor, Meadow's, chain gear, good condition, £1 5s., or four fertile Italian Queens, pure, 1922.—J. L. DAVEY, 45, Pinchbeck Road, Spalding, Lincs. h.124

EXCHANGE for good 12-bore Double Gun, Bees in new C.D.B. hives with one shallow frame crate, one rack sections complete, also Extractor, geared.—Sunnydale, Willingham, Cambs. h.125

QUEENS.—Six young proved Italian Carniolan, honey getters, 6s. 6d.; on frame of bees, 11s. 6d.—BARRETT, Cecil Park, Pinner. h.134

FOR SALE, Extractor in excellent working order, suitable for apiary of 20 stocks or over, height 2 ft. 6 in., diameter 3 ft. 3 in., take any frame up to 16 in. x 10 in.; four Reversible Cages, complete with gearing; 60s., f.o.r.; cash with order; a bargain.—SECRETARY, Bee Association, Letterston, Pem. h.136

LIGHT LEICESTERSHIRE HONEY, £7 10s. per cwt.; tins and carriage free; 28-lb. tins; sample 4d.—ERNEST HULL, North Street, Barrow-on-Soar. h.137

FOR QUICK SALE.—3½ gross 1-lb. Honey Jars at Market Harboro', £4 15s.—HOWARTH, Weymouth House, Turret Road, S.E.18. h.141

HEALTHY STOCKS Dutch Hybrids, 50s.; Simmins', on commercial frames, 75s.—Beecn Cottage, Longton, Preston. r.h.83

NEW Seed Limnanthis Douglassi, 2s. 6d. oz., post free.—GRUBB, Mark's Tey, Essex. h.142

A SPLENDID 10-FRAME STOCK of pure Italians, 55s. 6d.; also Italian Hybrid, 50s.; guaranteed healthy, and to give satisfaction; proved good honey gatherers.—CURTIS, 1, Nimrod Road, Streatham. h.79

20 SUBSTANTIAL HIVES for Sale, now in use, replacing with W.B.C. pattern, offering cheap.—SPECK, South Yardley, Birmingham. r.h.87

BEES.—Five healthy, strong Stocks, Italians, excess of requirements, being offered.—SPECK, South Yardley, Birmingham. r.h.88

SURPLUS.—Bottles, Extractor, Feeders, etc., new, carriage paid. Write for particulars.—SPECK, South Yardley, Birmingham. r.h.89

FEW good fertile Hybrid Queens, 6s. each.—ADKINS, Highmoor, Harpenden. r.h.85

THE World's Famous Raspberry, Lloyd George, perpetual fruiting, 30s., 50s., 60s., and 70s. per 100.—J. KETTLE, The Violet Farm, Corfe Mullen, Wimborne, Dorset. h.78

PURE Italian Bees, swarms in skeps 30s.; also on four frames 30s.; cheap line, quality good; box 6s., returnable; cash with order.—HORSLEY, Greeba Mills, St. John's, I.O.M. a.h.52

TWO 10-frame Stocks, Bozalla Queens, 75s.—MURLESS, Ruabon. r.h.59

SELL.—Two small powerful Acetylene Brass Head Lamps, with separate generator, suitable light car or cycle car, £3 the set; Mills' Automatic Acetylene Generating Plant, suitable for 10-roomed house, £6; quantity of Acetylene Gas Brackets and Chandeliers, prices with particulars; all carriage forward.—HERROD-HEMPSALL, Old Bedford Road, Luton, Beds. c.77

MODEL VERTICAL STEAM ENGINE for Sale, cylinder bore 1½ in., stroke 1¼ in., slide valve, height 10 in., well made; also piece of 4-in. Copper Tube, sealed both ends, suitable for boiler, 35s. the lot; carriage extra; a bargain.—Box 79a, B.B.J. Office, 23, Bedford Street, Strand, W.C.2. f.141

QUADRANT ROADSTER BIKE, 1912 model, good running order, £7, or nearest offer.—L. HAST, Sunny Vale, Alfriston, Sussex. r.h.18

WANTED, small Pump for tank in greenhouse.—Price and particulars to W. HERROD-HEMPSALL, Luton, Beds. f.108

FINEST ENGLISH HONEY, quality guaranteed, in 28-lb. tins, 1s. 3d. per lb.; tins free; f.o.r.—HARVEY, Apiarist, Andover. r.h.76

HONEY FOR BEE-FEEDING.—Australian, 60-lb. tin, 35s.; 8 lbs., 7s. West Indian, 56 lbs., 35s. 6d.; 7 lbs., 8s.; a cheaper quality, 60 lbs., 30s.; carriage paid; reduction quantities; samples on application.—LONDON TRADING AGENCY, 32, St. Mary Axe, London, E.C.3. r.h.115

DISSOLVING PARTNERSHIP.—Sale, Hives, new this year, double walled back and front, painted, single brood box, 25s.; double brood box, 30s.; Bees, 7s. 6d. per comb, with Queen; carriage forward; c.w.o.—LACEY & EARL, Orchard Apiary, Anstey Lane, Leicester. h.118

BUSINESS ADVERTISEMENTS.
1½d. per word.

THE WISE BEE-KEEPER looks for quality. The South Hampshire Apiaries breed only from the very best strains. Result: Quality and satisfaction. Beginners' Outfits from £5.—All communications, H E. NEWTON, New Milton, Hants.

FERTILE DUTCH QUEENS, 1922, natural bred, 5s. 6d. each, by return.—E. LANG, 124, Canterbury Street, Chorley, Lancashire. h.126

GENTLEMAN leaving property instructs us to sell his Apiary; Five W.B.C. Hives, each with three lifts, brood box, painted and roofed, in excellent condition; three 6-frame Stock and two 10-frame, each has fertile Queen; also large Skep Stocks; guaranteed no disease; Appliances, etc. Best offer for whole or part accepted.—THAMES VALLEY BEES (Regd.), Teddington.

ITALIAN QUEENS OF GOOD STRAIN (fertile, 1922), 5s. 6d., post free.—MIDDLETON, New Oscott, Erdington, Birmingham. h.127

GRAFTON ITALIAN QUEENS, fertiles, 7s.; three, 20s.; return post; quotation quantities.—MASOM & HEDLEY, Grafton Regis, Stony Stratford. h.128

IMPORTED ITALIAN QUEENS, Penna or Tortora, 6s. 6d.; prompt delivery; 8-frame Stocks, 45s.—HENSLEY.

BOTTLES! BOTTLES!! BOTTLES!!!—Pound screw-top, caps and wads, 29s. gross, or 3s. dozen.—HENSLEY, Luton Apiary, Chatham. h.129

COTSWOLD DRIVEN BEES.—Few exceptionally strong lots, young Queens, 12s. 6d. each; crates returnable.—BOWEN. h.130

STRAW SKEP STOCKS, healthy and strong. 25s. each.—BOWEN. h.131

AUSTRALIAN HONEY for feeding, in 60-lb. tins, 35s., carriage paid.—HARVEY, Apiarist, Andover.

HYBRID and Black Queens, 1922, vigorous, 3s. each, post paid.—HARVEY, Apiarist, Andover. h.140

ENGLISH HONEY wanted, any quantity. State lowest price.—Box 88, B.B.J. Office, 23, Bedford Street, Strand, W.C.2.

HEALTHY DRIVEN BEES.—Natural Swarms, this season, with fertile Queen, 10s. 6d. per lot, carriage paid; cash with order.—PULLEN, Ramsbury, Hungerford. r.h.101

FOR SALE, two 4-comb Nuclei, Italians, 30s. each; carriage extra; box 10s., refunded on return.—HERROD-HEMPSALL, Apiary, Luton, Beds. g.112

TO ALL SECRETARIES and BEE-KEEPERS.—Send to me for samples of Honey for autumn feeding.—F. GOODRICH, 10, Weston Park, Crouch End, London. h.109

CARNIOLAN QUEENS by return of post, 10s. 6d.—PEARSON & GALE, Marlborough. h.112

STRICTLY BUSINESS.—The Acarine Eclipse Cartridge, to use in the smoker, at any time, per dozen, 6s., post paid; Flavine—S Bee Candy, 6 lbs., post paid, 7s.—S. H. SMITH, 30, Maid's Causeway, Cambridge. h.23

E. H. TAYLOR, LTD., WELWYN, HERTS

The Largest Bee Appliance Manufacturers in Europe.

FORTY PAGE ILLUSTRATED CATALOGUE POST FREE.

FAMOUS COTSWOLD QUEENS, 9s., ensures powerful stocks in spring. h.132

SUPERIOR HONEY TINS, strong handles, bolted lids, 7 lbs., 10d.; 14 lbs., 1s. 2d.; 28 lbs., 1s. 9d.; carriage extra.—BOWEN, Coronation Road, Cheltenham. h.133

FEW imported Italian Queens, 1922, 5s. each.—COBB. r.h.113

HONEY BOTTLES, 30s. per gross, 3s. per dozen. —COBB, 35, Bevan Road, Plumstead. r.h.114

SPECIAL OFFER.—Strong pure Italian 3- or 4-frame Nuclei (July Queens), 25s. and 30s. (carriage paid); also new Bee Appliances at greatly reduced prices.—LONGLEY, 35, Tharp Road, Wallington, Surrey. h.121

FEW ITALIAN QUEENS for Sale, just received from Swiss canton Ticino, where Ligurian bees are indigenous, price 10s.—DAVIDSON, Beekeeper, Burton-on-Trent. h.135

RE-QUEEN selected Penna Queens, 6s. 6d. each, per return. Quantities or booked advance reduced prices.—GILBERT STONE, Chelsea Road, Easton, Bristol. r.h.38

ORDERS taken now for Driven Bees, September delivery, 10s. 6d., 12s. 6d. per lot, with fertile Queen; strong 10-frame Stocks, 65s.—W. WOODS, The Firs Apiary, Normandy, near Guildford. h.138

STRONG, healthy Driven Bees with Queens, 8s. 6d.; spare Queens, 3s.; carriage paid; boxes returnable.—MORETON, Hallow, Worcester. h.139

IMPORTED Carniolan Queens, 8s., August.—B. WOODLEY, Thorne, near Doncaster. h.75

FERTILE ITALIAN QUEENS by return (weather permitting), 7s. 6d.; Hybrids, 5s.—TICKELL.

VIRGIN QUEENS, Italian, 2s. 6d.; Carniolan, 2s. 9d.; Golden, 4s.—TICKELL.

CHEAPER than Driven Bees.—Three-frame Nuclei, 22s. 6d., carriage paid; box 5s., returnable.—TICKELL.

CANDY, 7 lbs. 7s. 6d., 10 lbs. 10s. 6d., post free. —JACK TICKELL, Westbourne Apiary, Cheltenham. r.h.71

CHOICE COLONIAL HONEY, in 56 lb. tins, 55s. cwt. Run Honey and Sections required.
THAMES VALLEY BEES (Regd.), Teddington, S.W. r.h.73

QUEENS.—Fertile 1922 Italian Hybrids by return of post, price 8s. 6d. each.—HOSEGOOD, "Beecot," Cliff End, Purley, Surrey. h.s.1

7/- ITALIAN QUEENS, beauties, giving magnificent colonies heavy storing bees.—ATKINSON, Fakenham. r.h.42

"SPLENDID! No swarms from your queens so far," writes Kent client, July 26. 7s. pure Italians.—ATKINSON, Fakenham. r.h.43

PENNA QUEENS.

Address:—E. PENNA, Casella Postale 178, Bologna, Italy.

PRICE LIST FOR 1922.

	August.	September.
One Young Pure Fertile Italian Queen	8/-	8/-

SPECIAL OFFERS, until countermanded, for queens in lots of 4 at a time: From August 1st, **£1 4s.** Orders booked in rotation, cash with order, carriage paid, safe arrival guaranteed. Payment by cheques or British postal orders. International money orders are **not** accepted. **10%** discount to Apis Club members on my prices, **except** on "Special Offers."

BRIG.-GEN. L., June 28: "Queen arrived safely. Looks first class, and very good value for money." August Queens specially fine, secure yours early, 7s. each, pure Italians.—ATKINSON, Fakenham. r.h.44

CHOICEST ITALIAN QUEENS BRED; great workers. "Your queens have done the best of all I have this year," writes N. The Queens up again with my fine Queens, 7s. each.—ATKINSON, Fakenham. r.h.45

AMPLE SUPPLIES of my fine Italian Fertiles, one, dozen, or hundred; quick delivery; satisfaction perfect.—ATKINSON, Fakenham. r.h.46

"YOUR QUEEN has done very well, filling 10-bar hive with beautiful Italians," writes F. Dozens more express every satisfaction.—ATKINSON, Fakenham. 7s. each. r.h.47

1922 RE-QUEENING.—Book early. Sooner done earlier I can arrange to cover all requirements beyond a considerable estimate already fixed These Italians make good.—ATKINSON, Fakenham. r.h.48

TORTORA QUEENS.—Address, E. TORTORA, Ozzano Emilia, Bologna, Italy. Special offer for August for no less than two Queen Bees. Special conditions to wholesalers. r.g.91

WHY PAY HIGH PRICES for Bees to pay for big, heavy advertisements? PULLEN, Ramsbury, supplies good Driven Stocks at 10s. 6d. per lot. See other advt. r.h.101

PENNA STOCKS ARE BEST.—Famous 6-frame Stocks headed by young fertile imported Penna Queen, delivered immediately for 40s.; 3 frames 23s.; Cleopatra Stocks at same price.—THE THAMES VALLEY BEES (Regd.), Teddington. r.f.172

BEES REARED ON ALF. RYALL'S LINES keep well. Buy his advice.

"WIGHT" AND "ACARINE" DISEASES.—Prevention and removal; invaluable advice; 5s. 6d. "An eye-opener."—ALF. RYALL, 8, Ospringe Road, N.W.5. r.c.87

QUEENS by return from April till October.—PEARSON & GALE, Marlborough. w.14

JACK TICKELL.—For Queens, Stocks and Nuclei. List free. — Westbourne Apiary, Cheltenham. r.a.54

DUTCH BEES.—Send for my artistically Illustrated Catalogue outlining my method of managing bees profitably. Read my notes on Queens and Queen Rearing. Will interest the expert and amateur. Free for the asking.—WHYTE, Bee Farm, Cumbernauld Station, Dumbartonshire. r.b.32

HAVE YOU READ "THE BEE WORLD"? If not, why not? Every number in itself is a useful literary work for practice and reference. Specimen copy free.—Offices: THE APIS CLUB, Port Hill House, Benson, Oxon.

GORDON ROWE, 28a, Moy Road, Cardiff, requires gross lots new 1st grade Sections.

PARCHMENT CONTAINERS, stamped "Fine Lemon Curd," offered at half price to honey producers who can affix labels over the printing, 1 lb., 4s. 9d.; ½ lb., 4s.; ¼ lb., 3s. 6d.; ⅛ lb., 2s. 3d. per 100. Add for carriage 1s. 6d. to each 5s. value ordered. Terms cash. 2-5 cwt. lots light English Run Honey required urgently. Send sample and price.

THE GREAT ALTRINCHAM SHOW.

President: THE RIGHT HON. THE EARL OF STAMFORD.
Chairman: SAM. W. GOULD, ESQ., J.P., C.A.
WEDNESDAY, SEPTEMBER 20, 1922.
THE SHOW OF SHOWS.
£3,000 in Prizes, together with **Championship Cups and Medals.**
Horses, Cattle, Pigs, Turnouts, Hunters, Jumpers, Roots, Grain, Flowers, Butter, Cheese, Implements, Dogs, Poultry, Pigeons, Rabbits and Cavies.
Increased Prize Money in all Sections.
Schedules on application to the SECRETARY.
Entries close Friday, September 1; Dogs, Friday, September 8.
HERBERT TURNER,
Secretary,
1, Market Street, Altrincham.
Telephone: Altrincham 174.

If ordered now

30% discount on double-grafted, fertile, guaranteed **American Beauty Queens** for 1923 delivery. Safe arrival by registered mail, and perfect satisfaction guaranteed: you can say what is perfect satisfaction.

	April.	May.	June.	July.	Aug.—Sept.
Prepaid in September ...	9/9	8/5	7/-	6/3½	5/7½
Prepaid in October	10/6	9/-	7/6	6/9	6/-
(Nov. to March, 20% to 5% discount).					
After February 28th	14/-	12/-	10/-	9/-	8/-

Cheques or British P.O. Orders by registered mail, please.

Early orders save me from summer correspondence, the most wasteful and costly feature in breeding Queens: let us economise.

MY 1922 RECORD: Of all the Queens sent to England this year, only one was injured "en route" (replaced), none was returned as dead in the mails, none was returned as unsatisfactory. This record is my pride and your protection. I KNOW HOW TO BREED.

SKIPWITH CANNELL

Maure, par Seyne-les-Alpes, B.A., France.

ITALIAN QUEENS by RETURN OF POST. Tested, 9s. 6d.; Untested, 7s. 6d.—PEARSON & GALE, Marlborough.

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The Bee-Keepers' Calendar.

AUGUST.

31 Thursday "But a cunning man was the cobbler;
He could call the birds from the trees,
Charm the black snake out of the hedges,
And bring back the swarming bees."
Whittier, "Cobbler Keezar's Vision.'

SEPTEMBER, 1922

1 Friday. "All the breath and the bloom of the year in the bag of one bee."—*Browning, "Summum Bonum."*

2 Saturday. "Thou, like the harmless bee, mayst freely range,
From mead to mead bright with exalted flowers,
From jasmine grove to grove."—*Thomson, "Summer."*

3 Sunday. "Bees work for man; and yet they never bruise
Their master's flower, but leave it, having done,
As fair as ever, and as fit for use:
So both the flower doth stay, and honey run."
George Herbert, "Providence."

4 Monday. "That faint utterance which tells
Of treasure sucked from buds and bells,
For the pure keeping of those waxen cells."
Wordsworth, "Vernal Ode."

5 Tuesday. "And others pack the honeyed excellence
Close, with pure nectar plumping every cell."
Virgil, Georgics, Book IV.

6 Wednesday. "And now my bees they hurry forth
Till eve the dusk doth bring,
And east and west and south and north
They go a-gathering.
The pollen and the honey good
They gather in four-fold,
And all I paid the bee-master
They give me back in gold."
E. S. F. (B.B.J., 10 V., '17).

Obituary Notice.

DR. F. A. BONNEY.

We are sorry to have to record the death of Dr. A. F. Bonney, Buck Grove, Iowa. A letter from Mrs. Bonney tells us "He passed to the Great Beyond, June 30, after several months' illness. All that was possible for loving hands to do was done; the best medical skill was employed, but all to no avail, and he succumbed to uremic poisoning."

Dr. Bonney was a frequent contributor to the bee Press, and articles from his pen have appeared in our columns from time to time. He was a prominent member of the Iowa Bee-keepers' Association, and had been president three times. He had a varied career, for in addition to practising as a doctor of medicine he had been, among other things, an explorer, detective, lecturer and editor. He was not an extensive bee-keeper, keeping up to about 50 stocks. In his work among them, and in advertising honey and other products, he showed acumen and originality, and was not afraid of airing his views. This is shown in his last article in the *American Bee Journal* for this month. Men of his stamp are an asset to any profession; bee-keeping needs more of them, and his death is a loss to the craft.

The B.B.K.A. Annual Show in Connection with the Grocers' Exhibition.—Will intending exhibitors bear in mind that entries close on Monday next, September 4. Up to the present entries are not at all numerous, and it is hoped that many more will be made during the next few days.

A Dorset Yarn.

"Tell me in what state of life man may ever happy be?"

This query is supposed to be from the old Greek writers. Many centuries ago the acme of life was happiness; how to get that pleasure was everything to them. It is the same to-day. Some find it in one thing alone, some find it in many subjects. We bee-keepers find it with bees. This year most bee-keepers speak and write of small surplus; yet all of them seem happy. Whatever their part in the work of the world, Stock Exchange or hoeing turnips, meetings of bee-keepers all show the happiness one gets with bees. In the New Forest on the 23rd a number of enthusiasts met at the honey show at Bartley Cross; the honey shown was great in weight and high in quality. A miniature pyramid of 3-lb. bottles, broad at the base and finished with a single bottle at the top, the produce of a few hives, was shown by Colonel Kettlewell, of Hythe. A display of honey and wax by Mr. White, of Winterbourne-Gunner, was delightful to see. All honeys were light, and his wax was the clearest I have ever seen. The open classes of run light honey were of great value; the three best were very difficult to choose. They all came from the chalky soils of Wilts and North Hants, from Salisbury and Andover, but the extreme happiness depicted on the faces of competitors was easily noted, whether immaculately dressed in best style or straight from work in the fields, as they came to see the honey staged there. They tell me the great success of this show was owing to the indefatigable efforts of Mr. Dalrymple, but I feel that Mr. Young, the County Bee Instructor, and Mr. Bright, of Lymington, the local secretary and expert, must take some of the credit for their tuition in that area. If happiness is the result of their labours, then it is not in vain. Pope wrote of "Happiness, our being's end and aim." These teachers of bee craft will feel that they have promoted happiness, though when some stocks go under in the winter it must be discouraging. "Happiness then too swiftly flies," but the indomitable perseverance of bee-keepers goes on again; they "try, try, and try again," until they master every ill that befalls their bees. We have had two stocks robbed out entirely last week (have been away a great deal), but we know that this is the law of bees, the strongest overcome the weaker, even though they themselves came from the same hive but a few weeks before. I presume, though, even bees get a certain amount of happiness out of this robbing others. If men and women can get happiness with the simple things of life, if they can promote happiness by inculcating this love of bees in the hearts of others, then they are helping to build up a greater Empire, for contentment and happiness must be for the betterment of the people. They will "scatter plenty on a smiling land" because they are adding to the food supply of our own loved land. They will be adding to their own bank balances by the honey they use to save purchases of other articles of diet; they will be adding to the purchasing power of the nation. I can show by the slips to the bank—and I keep separate entries on all cheques paid; the name shows if it is fruit, flowers or honey—and can tell how much from each. Yet one cannot accurately tell from this alone. One can get the amount, can deduct the purchases of bars and sections, can get at the actual amount to the good, but one cannot get all the amount that is due to the bees, because they pollinate all our fruits for us, and it is the great crops of fruit that sells the land on which it grows. Have this year sold some small

plots that cost me £300. They were derelict, but it was all worked by hand (the spade and fork), all planted with bush fruits and raspberries, apples, pears and plums; they all looked full of promise. I have found that one can teach with the eye better than with the tongue. "This land that was desolate has become like a garden of Eden," so full of fruit and flowers, so desirable to the eye, that it has passed to two other small holders for one thousand and seventy pounds. One cannot account for the great value of bees by the cheques for honey alone. Certainly it was bees that added to its value in the great crops of fruit, for when the raspberries had their great wealth of fruit bees were pollenising the flowers on the tops of the young canes. All this induced the purchaser to buy. In my opinion, bees should claim a large share of this enhanced value. If the production of honey and keeping bees gives happiness, if the value of land increases so much through the labour of man and bees, you can understand the great happiness of the Dorset Yarner.

Visitors keep on coming. If they all write of me as these have done in the last issue of the *B.B.J.* I shall soon have a bad attack of swelled head. Still, I know that I am not alone; others are doing just the same, only they do not come into the limelight like the men with plenty of gas; *they* must let off some of the surplus steam. The land on which the glass-houses stand was all heather and gorse (have left a small corner so that all visitors can see). It was rented on a builder's lease to redeem in 10 years at £30 per acre. For this alone have been offered a thousand pounds. It is only 2½ acres; was able to redeem it in the 10 years; have been able to pay for the glass-houses. I leave readers to guess how much the bees have helped me to find the money. We have lived the simple life, grown the greater part of our food, used honey as food, a plentiful supply of vegetables and fruit. When renting the farm where we live we had a big field of wheat and used our own flour, but soon found that there was more in fruit and flowers than in growing corn. We get the greatest happiness in life; we have not to seek for it, it is with us every day. "Something accomplished, something done."

J. J. KETTLE.

Jottings from Huntingdonshire

Has anybody seen the book scorpion? If not bee-keepers will be well advised to make his acquaintance. He's a lovely little chap, and as cunning as he is small. If you place him under a microscope he looks like an ogre ready to swallow you at sight, and you are terrified somewhat until it dawns upon you that if the scorpion looked at you through a similar medium you would strike him as a prehistoric monster of the pleiosaurian type. Thus heartened, you proceed with your investigations, and when you learn his mission in life you want at one and the same time to shake his hairy paw, tickle him under the fifth rib or whatever may be his equivalent for that description; also to box his ears—the latter because he often makes his home upon the house-fly and feeds upon microscopical beings which prey upon that insect, and thus make the fly more able to tease and tantalise you when you are taking a well-earned afternoon nap on some over-warm day. The former because he dwelleth also in skeps and lives and devours that baneful terror, *Tarsonemus woodi*. Would it not be delightful to domesticate him? Scientists call him *Chelifer cancroides*, but that needn't deter us. Not infrequently in the early spring of the year, when digging the garden, I open the fowl-run and invite the fowls to come and dine. They accept the invitation, and it's a delight to watch the cocks and hens rushing forward to peck up grubs and larvæ and creepy crawlies as each spit is upturned. Therefore how nice to keep a few book scorpions handy, and as soon as the first symptoms of disease showed itself in a hive turn them loose to feed upon the acarii. It may be asked: "Don't they find their way to the hives in any case?" They do, and we, poor ignorant creatures that we are, kill them, not knowing what we do. A very interesting article in the June *Bee World*, by Alois Alfonsus, set me thinking. The incidence of holidays crowded such thoughts away, but they came back with a rush on reading in a daily paper that the influenza germs are so small as to pass through a Berkfeld filter. I asked a medical friend whether such filtration might result in the influenza germs passing through and the germs which were their natural enemies being retained, and he replied it was quite possible. Be it therefore known unto you all whose lives are incomplete without the companionship of bees that many disinfectants used to destroy *Tarsonemus woodi* may kill our friend *Chelifer cancroides* and save our enemy alive. I do not for a moment wish to assume that the book scorpion is to be found by the million, nor perhaps by the thousand. There may be only a few score in a hive, but by the looks of him he is well capable of consuming many hundreds of the bee-keepers' pest. Alfonsus tells us this chelifer is not unlike a bed bug. Need we say more? If he can do as much damage and cause as much pain to *T. W.* as a bed bug to us, well, he's just the chap to be prowling inside a hive. More power to his snout. Many of us use paper quilts. This may be all to the good, for, as his name implies, the book scorpion is found in books, but, as his preference is for books well seasoned with age, we may be wise to retain our paper quilts from year to year—in fact, as long as they serve their purpose for giving warmth. (Needless to say, if foul brood should show itself all quilts would be burnt.)

One of the ways of combating disease in a hive is to ensure a good, healthy, vigorous queen; but, unfortunately, prolific queens, though producing bees in great numbers, do not always produce first-rate foragers. Let us for the time experiment, ruling out those

so-called disinfectants which give *Chelifer caneroides* his quietus and fasten on something which will stimulate the prolific breeding of the book scorpion and stay the ravages of *Tarsonemus woodi*.

Steeple Gidding. E. F. Hemming.

P.S.—I have on hand several letters from bee-keepers awaiting an answer. I hope to answer them all in due course.

Week-End Bee-Keeping

By S. H. Smith.

(*Continued from page* 412.)

Owing to a heated argument at lunch-time I was a little late in getting to the apiary. D. B. was sitting in the shade of a big beech and his eyes were glued on a couple of skeps, in and out of which bees were hustling merrily.

"Those skeps came here last Tuesday, D. B., and they need attention. I should not be surprised if one or both swarmed any day. If you want to run bees on the cheap it will be worth your while to go in for skeps. But you will have to act and trade quicker than when dealing with bees in modern hives. Our skeps are too small for easy-going methods, and the season is short during which you can dispose of them as established, going concerns. But, as I told you, the prices obtainable are fairly high and profitable. And, of course, if you like to sell swarms you can get them easily enough.

"Now visualise those two skeps as

A and B

and your education in this line will commence at once. We will drive the bees out of A and call the skep we get them into C. We place C on the stand of A, put A on the stand of B, and remove B to a new stand, as below :—

C A B

"Now, what has happened? For one thing, we have three stocks instead of two. The stands keep their numbers or letters, and you can keep track of the shifted bee stocks by putting them down in a book. Let us analyse the new situation.

"The artificial swarm at A will work fast to establish itself in its new house, and we may help it by giving it sugar syrup until its combs are drawn out. The flying bees from B will care for A's brood on B's old stand, and after a while they will draw out queen cells to re-queen the stock. C (formerly B) will be so weakened by the loss of its flying bees that it will keep pretty quiet until its brood emerges, when it will boom along nicely.

"All this is only common, every-day practice. We will proceed to refine it a bit, and you will be at once initiated into advanced bee-keeping methods with bees in skeps.

"As soon as we have driven A we cut out a piece or two of the combs in its old home, choosing a nice even comb with brood and some empty cells. Beforehand, we will make up a short frame to fit the skep, and into the top bar we will drive two 2½-in. nails. Into this improvised frame we fasten the cut-out piece of comb, tying it in with string. We now push the nails sticking out of the top bar through the roof of the new empty skep, bend and clinch them, and put the skep on A's old stand. We then dump the driven bees in front, and they will stream in cheerfully. The frame of brood will keep them contented, and give the queen a chance to continue egg laying. We could give two or more frames, if necessary. Now we give them a syrup bottle and let them alone.

"The flying bees from C (old B) will not be called upon to cover as much brood as by the old method, and can go out gathering in the fields all the sooner. Here, of course, we may introduce a young fertile queen to save time, or we can change from Blacks to Italians.

"Yes, these bees are pure Blacks. The Fen people know little or nothing of Italian bees. They are a good, working strain all right; look at the 'plus fours' of all colours going through the doorways.

"When we cut out two pieces of comb we can get a good look at the other comb surfaces. There is a lot of humbug written about skeps being closed books. They are really as simple to investigate and handle as frame hives, if you go at them right. You will see how easy it is to bend over the soft, warm combs and to look between them. The old-timers knew all about it. They had special steel comb cutters. One was thin in the shank, with a short, sharp blade piece bent at a right angle at the end. You insert this tool between any combs, give it a half turn, and cut through what part you need. Another tool is a straight thin rod with an inch-wide sharp-cutting edge, hammered out at the end. With this you cut straight down into the comb to meet the horizontal slice made by the first tool. I have these instruments in the honey house.

[Will Mr. Smith tell us how to put these combs back again?—Eds.]

"Unless we want B (old A) to re-queen itself we must cut out all queen cells. If we introduced an Italian queen bee we should see yellow bees flying by clover time.

"Simple enough! Yes. But we have only begun to get to work. One Italian queen would be enough to Italianise a dozen such skeps in one season, if you go at it right and work the little frame trick.

"After getting the three skeps going, as outlined, there would be little to do, beyond putting on section racks. If the season were favourable, you might expect 20-30 sections from each stock.

"Only sixty to ninety sections! What more do you ask? Supposing two skeps cost you £4. They are still there at the end of the season, and you have another one worth another £2. Ninety sections at 1s. 6d. will be worth £6 15s. You invest £4, plus the cost of the sections and racks, and your capital increases to £12 15s. Profiteering I should call it, if I did not know that there are lions in the path of the would-be bee-keeper-capitalist.

"We could use more Italian queens and make nuclei out of A and B, and by the end of June we could have sold, maybe, five or six skeps of Italian bees at anything from £2 10s. up, declared a dividend, closed out the whole outfit, pocketed our swollen capital, and gone about something else.

(To be continued.)

Notes from Gretna Green.

THE SEASON.

Summer went by with only one solitary swarm from my twelve stocks, but in early August a few consecutive warm days suggested that the long-deferred honey flow had begun.

Bees were swarming daily, and the apiary was fragrant with incoming nectar, but, unfortunately, the boom was short-lived, and only two or three good bee days have come since then.

Last year a neighbour extracted 190 lbs. honey from one colony, but this season his best gave only 15 lbs. A striking difference in quantity, and in quality as well, for this summer's crop, gathered from mixed sources, is entirely different in appearance and flavour from the water-white thin clover honey of 1921. Here, at sea level, neather has been in bloom for some time, but the real honey flow from this source is still to come. Colonies are in excellent condition, particularly so where two queens are being used to build up for the late gathering, one dual-queen stock getting the length of three chambers filled with brood and bees. Having two queens in a stock previous to and during the heather flow means getting more brood, and, consequently, more bees, while brood-nest storage is less likely than when one queen alone is trying to stem the tide of incoming heather honey.

So far I haven't a single section fully sealed over, and although one strong colony stored a fair amount of honey in full-depth supers, this will all be reserved for winter stores.

I.O.W. Cures.—Mr. Smith has sent me a sample of his latest invention in the vapour-treatment line, but I have no means of testing it at present. By the way, Smith mentions that he hasn't had a crawling stock in his apiaries since 1919, and we must have a contribution from him telling how it is done. The information might be useful to those who are still waiting for the scientists to produce a remedy. Personally I consider that rather much attention has been paid to *Tarsonemus woodi*, and not enough to the predisposing causes that give the mites a temporary or permanent footing in our colonies.

August 19. J. M. ELLIS.

Honey Imports.

The registered value of *Honey* imported into the United Kingdom during the month of July, 1922, was £18,205.—From a return furnished by the Statistical Office, H.M. Customs.

A Visit to the Hermitage Farm, Buxted.

A party of bee-keeping students from Preston Hall Training Colony for Ex-Service Men, under the charge of their able apicultural tutor, Mr. George Bryden, and his friends, paid a delightful visit to Buxted on July 28, and enjoyed the hospitality of Mr. and Mrs. Anderson at the Hermitage Farms, High Hurstwood.

Our char-a-banc started from Preston Hall at 9 a.m. and arrived at Buxted at 11 o'clock, after an exhilarating run through the bracing "Sussex Highlands." Mr. Anderson drew our attention to a witty and helpful programme in large type of the day's proceedings.

We need not describe the unique, historic and up-to-date interests of the Hermitage Farms, with the memories of the hermit of the simple life, content with what Nature unaided provided him, and present-day application of science and harnessing of water and electricity which has been brought to a fine art by Mr. Anderson. All this has been done in previous reports of meetings at Buxted. We will confine ourselves to matters of bee-keeping interest.

We were immediately introduced by Miss M. Dagmar Sillar, manager of the Hermitage Farms, to the apiary G.H.Q., which consists of a number of rooms conveniently near the apiary grouped around a water tower. In one room we saw the arrangements for sterilisation, painting and creosoting the hives. We next saw the electrical apparatus for "woibleting," wax smelting, heating, etc., etc., and all the processes for building the requirements of a hive, with the cunningly-devised inventions of Mr. Anderson, and other appliances, ending up with the *pièce de résistance* of the magnificent pyramidical display of honey specimens produced on this farm. This was shown to full advantage by cunningly-hidden electric bulbs.

After an appetising lunch, keenly enjoyed, Mr. McKay, of New Zealand, gave us a splendid "chat" on his bee-keeping experiences in New Zealand. This chat ranged over the primitive beginnings with kerosene boxes for hives to the introduction of Langstooth hives and fittings, and showed us to what a scientific art bee-keeping has been brought in New Zealand, when Mr. McKay incidently revealed the fact that he had never had personal experience in his apiaries of foul brood, nor had he ever had the necessity of hiving a swarm, although he had carried on successful bee-keeping for many years. Besides describing for us a living picture of bee-keeping in New Zealand, he explained to us the many ways in which the Government of that Colony aids the industry. Everybody was full of praise for the racy and enjoyable chat they had had with Mr. McKay. On visiting the apiary our attention was drawn to the experiments being made with some hives with aluminium combs and commercial large-size frames of comb. So far, these do not seem to present any appreciable advantage over those in ordinary use. We must not forget a word or two about the observatory hive, which is

contained in a summer house with an artfully-contrived entrance and alighting board for the bees, and inside the house are comfortable seats where one can sit and smoke the "pipe of peace" and watch the wonderful details of the working of the busy life of the bee without any fear of its sometimes too-busy javelin.

After tea, Mr. and Mrs. Anderson and Miss Sillar acted as our guides in visits to the poultry, water fowl and other stock, where again we saw the fruits of the inventive genius of Mr. Anderson at every step—syncronised electric clocks, chaff cutters, water pumps, machine saws, etc., etc.

Every member of the party agreed that a most instructive and entertaining day had been spent, and our hearty thanks were given to our hospitable hosts, and to Mr. George Bryden, who had so ably organised the party. — C. HAMER.

Newcastle and District Bee-Keepers' Association

(IN AFFILIATION WITH DURHAM COUNTY BEE-KEEPERS' ASSOCIATION).

A party of members of the above Association, some of whom brought their wives and children, journeyed to Burn Hill to see how the bees were faring, as reports from Mr. Dent, the gentleman in whose care they are, indicated disaster, as they resembled nothing so much as an "S.O.S." call for help, and advised bringing sugar. Therefore it was in no light-hearted picnic spirit that the members approached their bee stocks, and no visions of racks of surplus filled their imaginative and ever-hopeful minds. Their chief concern was: "Will they be alive?" However, on opening the first stock we found the bees in a good condition, though greatly reduced in numbers, but having a little food for immediate needs.

The inspection of all the bee stocks at Burn Hill showed that stress of weather and starvation had reduced the efficiency of the colonies by fifty per cent.!! Bee stocks that boomed and boiled on ten combs and in two section racks now only barely covered seven or eight combs. While late swarms sent up to secure winter stores had dwindled to four or five combs, one "stock" was only on two! Another stock, which was furnished with fourteen standard combs and two shallow frame racks, only covered six combs barely. And while every stock (or, rather, I should say, nucleus) had nectar in its combs, it (the nectar) looked to the writer as if it had only been gathered a day or two before. Every colony is in danger at Burn Hill, should the weather prove to be unsuitable for honey gathering. And the bees, knowing their work, have stopped rearing brood; egg laying has ceased in all but a few stocks having young queens, and they have precious few!

Two stocks swarmed, and the bees were put back; there are two virgin queens in two hives, but they will mate, should the weather take a turn for the better.

And, saddest of all, we found "Acarine," with its accompanying symptoms of crawling, and wing dislocation, and general listlessness, very much in evidence in black stocks of unknown strain. Three stocks showed it, and the microscope was brought into use in an endeavour to find our enemy, *Tarsonemus woodi*, but, owing largely to the crude dissecting apparatus we had with us—pocket knife of the blunt variety—we failed to find it. Still, it is there, as we only too plainly could see from the symptoms.

The stocks showing it were all blacks, one of which belonged to Mr. Dent, of Burn Hill. This one was the most heavily infected of all. The writer has preached to members incessantly, until he is almost tired of doing so, of the imperative necessity of re-queening all stocks of doubtful parentage with queens of a known Italian strain. At last they see the need of doing so, and the sight of the vigorous three-banded bees hustling in has convinced them.

We then went to Salter's Gate and inspected some more bee stocks. All were decimated by hunger, the strongest stock sent up here was dead, and a cast on five frames of comb and brood was put in its place. Here, also, was a "barn of bees," "going like an engine." It was housed in a locker, or "kist," which measured four feet by twenty inches by thirty inches. The entrances were ten inches long by two deep, and were covered by queen excluder. It was an ungainly thing, but last year the owner harvested 112 lbs. of heather honey from it, proving its utility. Still, I prefer the hive as we know it.

The moors, which are capable of supporting an unlimited quantity of colonies, were hardly at their best, although plenty of heather was out. One patch of cut over land (woodland denuded of trees) of about 12 acres was one pink mass of French willow—a plant which grows to a height of from 4 to 6 feet, and is covered with "pinkish-red" flowers up the spike. It was a "sight for sair 'een" to behold it. And the bees were working assiduously. It yields honey and pollen largely, and the patch of bloom, as we saw it, was itself capable of supporting easily fifty colonies of bees, leaving the heather out. (This will be the Willow herb.—EDS.)

Altogether, it was a working holiday, all the male members being actively engaged in manipulating the stocks, while the ladies gathered heather, and blackberries, and wild rasps, which grow in abundance in places.

Given suitable weather for a month, the stocks will come round, but surplus is, I fear, not for us this year.

In conclusion, I must mention Mr. Dent's daughters, who ably catered for the liquid wants of the party, by supplying tea to the picnicers in a country where there is only heather, reservoirs and rain, honey being conspicuous by its absence.—JOHN BOUCH (Hon. Sec.).

Bucks Bee-Keepers' Association.

A successful show, arranged by this Association, was held in connection with the Bletchley Horticultural Society's show on August 7, 1922. Some excellent extracted honey and comb honey was exhibited. About 42 entries were staged, some being Royal Show winners; hives and appliances by Messrs. E. H. Taylor, Ltd., Welwyn, Herts. An observatory hive by Mr. A. E. Warren attracted a great many visitors. Mr. A. E. Warren judged the exhibits, and his awards gave general satisfaction.

They are as follows :—

Class 1.—Four 1-lb. sections : First, J. Kent, Milton Keynes; second, W. Deacon, Sidiling, Beds.; certificate, Miss M. Heale, Maidstone, Kent.

Class 2.—Four jars light honey : First, J. Kent; second, R. Holland, Stoney Stratford; third, H. T. Rainbow, Wolverton; certificate, H. Cox, Bletchley.

Class 3.—Four jars medium honey : First, Miss M. Heale; second, J. J. King; third, Rev. L. Jones.

Class 4.—Three jars granulated : First, E. Bliss, Dunstable, Beds.; second, A. H. Bowen, Cheltenham; certificate, J. Kent.

Class 5.—1-lb. jar : First, F. Holland, Dunstable; second, J. Kent; third, W. Deacon; fourth, E. Bliss. The honey in this class was sold, and the proceeds, which amounted to 30s., sent to Northampton Hospital.

Thanks are tendered to all those who sent exhibits in this class.

(*Communicated.*)

Warwickshire Bee-keepers' Association.

A meeting of members and their friends will be held at Mr. Franklin's apiary, Bee Croft, Burton Green, Kenilworth, on Saturday, September 2, 1922.

A demonstration will be given, at 3 to 4 o'clock and after tea, Dr. A. Z. Abushâdy, founder of the Apis Club and editor of the *Bee World*, will give an address on "Autumn Preparation for the Next Harvest." Burton Green is one mile from Tile Hill Station.

Cotswold Notes.

In spite of the stormy weather there is plenty of work for the progressive apiarist, and whenever the sun shines it is all "rush and tumble."

Very little honey has been gathered except for current consumption since the middle of June, and, indeed, there have been cases of swarms dying of starvation where left to their own resources. Queens issuing with casts have been as long as 24 days before commencing to lay, and not since July 11 and 12 have we had warmth enough for queens to fly with safety.

Bee-keepers hereabouts are still getting swarms; some of them quite large, but not such a large proportion are flying away as was the case in May and June.

Cool, cloudy days, when supered colonies become crowded and uncomfortable, produce just the condition which encourages swarming.

And, try how you will, only drastic treatment will forestall and prevent the swarm coming off. Sometimes nuclei will send out a swarm as large as a breakfast cup! Swarms at this period are of small value, and the best thing to do is to return them after more than a casual search for cells or virgins, as they may re-issue and fly away as one with us did recently.

The practice of going over the combs of three-storey colonies in search of embryo or finished cells is not all "beer and skittles" these days. Unless it is fairly fine and still, many stings follow the procedure, and it hardly seems worth while with the supers and sections crammed with bees. However, with good prospects of a flow from the August clover the trouble is small compared to the yield such strong colonies should give when their working force is held intact.

Prior to the rain, very little clover made its appearance. Now, there is a fine show in the fields and the plant has been able to make rapid growth.

There are seasons within the memory of hill bee-keepers when most of the surplus was obtained late from clover and charlock, and we are not without hope that with strong colonies the August flow will make amends, and obviate syrup feeding for winter stores.

Bees have not yet shown their disposition to rob, owing to the trickle of nectar from late limes and willow-herb, which blossom beautifully in and around the plantation. A few carbolic cloths are quite helpful in keeping robbers down, and for the information of non-users a 2-lb. French plum jar with wide screw top forms an excellent receptacle for the solution into which the cloths can be occasionally dipped and wrung.

I find the only time when cloths cannot be used is in dealing with cell cups, cages, or carriers. The slightest taint of carbolic acid on these will cause the bees to reject them.

Which shows how sensitive bees are. There is variety and interest in the changing moods of the weather these days, and the observant apiarist who is a lover of nature need never feel dull. Even when the storm rolls up the valley and the bees scamper home like flakes before the gale in winter time, one can enter the bee hut and, while taking lunch, ponder over the vagaries of the season.

Then the soft patter of the rain grows gradually less, and the dripping branches rustle in the breeze.

The black clouds fade over the hill, and as the sun gleams brightly from a faintly blue sky the bees flash by while the pungent aroma from the smoker smells as strongly as the wood fire of the bundle maker over the hedge.

A. H. Bowen.

Coronation Road,
Cheltenham.

CORRESPONDENCE.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real name and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

Wanted an Excluder!

[10680] I have this year tried an excluder (?), of which I was fool enough to purchase a dozen at 3s. each, expecting them to be A1, as advertised, but on taking my honey off (as I expected) I found, to my disgust, my supers full of capped brood—drones and workers—instead of honey, the queen in nearly every instance having got through the wires and spoilt my honey crop.

I am personally quite satisfied with an excluder of the old "B.B.J." type, but cannot possibly, so far, get one made nearly large enough to take and cover comfortably a "W.B.C." body box holding twelve standard frames, which is the size I make all my own hives.

I want a few dozen excluders (with border) of the full size of 19in. by 17½in., at a fair price. Can you kindly inform me of a maker who would supply me with this blessing, for which I have been waiting for years, i.e., a "B.B.J." excluder, 19in. by 17½in. (including border), at a fair price? If so, you would greatly oblige—EXPERIENTIA DOCET.

[Can anyone supply these?—EDS.]

Is Weekly Manipulation Advisable?

[10681] On page 378, second column, "B.B.J.," August 3, Dr. Abushady is quoted: "He thoroughly recommended weekly manipulation, by which it was possible to control swarming, at any rate, so far as it was humanly possible." That may be good advice for bees in Egypt, but is, so far as bee-keeping in this country is concerned, unsound advice to give to honey producers.

I would wish to go on record as stating that every time that stocks of bees are manipulated during a honey flow you bee-keepers reduce your honey crop. Further, manipulate, disturb, or interfere, with your bees as little as possible during a honey flow. Add on to that manipulate your bees as little as possible at any time if you are a honey producer, the amount of manipulation depending both upon the strain of bee and the observation of the bee-keeper.

This very point was one of the points or arguments raised by one extensive bee-keeper who was opposed to the powers to be granted in the last proposed Bee Diseases Bill. In talking the matter over with me he was not at all assured that inspectors would be appointed who had sufficient knowledge to be aware of the above fact.

It is no good simply talking, and, therefore I give you the following proof in so far as this season again emphasises my point. The apiary concerned is a control apiary, stocks referred to are Melapis bees, and visits I find from apiaries book were as follows:—

First visit, March 25; second visit, May 24, when first manipulation was started for swarm control; third visit, June 2, swarm control completed; fourth visit, July 26. Average crop from Melapis bees, 95 lbs., the best I have had this season.

To those who are "au fait" with extensive bee-keeping in this country, the Colonies or the Western Hemisphere, I need only point out how impracticable it would be to manipulate each stock weekly, and this fact has compelled those who are extensive bee-keepers to adjust or adopt plans given in bee literature or devise means of control.

I have not tried weekly examinations because I am convinced that it would give me a larger return in honey to let the bees swarm rather than follow it out, except, possibly, towards the end of a honey flow, when generally speaking there is less danger of swarming taking place.—G. THOMAS, Exning, August 14, 1922.

QUERIES AND REPLIES.

Using the "Whyte Cage."

[9942]—Would you kindly inform me in your "Queries and Replies" whether the comb of hatching brood to be used in a Whyte cage, or A.Z.A. semi-nuclei, should contain stores, or can the bees in the hive be depended on to feed the confined bees?—R. D.

REPLY.—The bees in the hive would feed those in the cage, if the latter had no stores, but it is better if the comb in the cage contains some food.

Notices to Correspondents

Correspondents desiring an answer in the next issue should send questions to reach this office NOT LATER than the FIRST POST on MONDAY MORNING. Only SPECIALLY URGENT questions will be replied to by post if a STAMPED addressed envelope is enclosed. All questions must be accompanied by the sender's name and address, not necessarily for publication, but as a guarantee of good faith. There is no fee for answering questions.

"MEAD" (Croydon). *Hot or cold water for making syrup.*—You may put the sugar into cold water and then heat it, or you may make the water hot before putting in the sugar. It will make no difference to the quality of the syrup.

Suspected Disease.

B. F. (Essex).—We could not find Acarine disease in the two samples of bees sent.

H. K. (Durham).—The bees sent were suffering from Acarine disease. We doubt if you can do anything for them so late in the season. You might try one of the advertised remedies and requeening—and then the bees will probably die during the winter. Better destroy them.

Bee Shows to Come.

A nominal charge of 2s. 6d. is made for notices (not exceeding 7 lines) in this column, 10 lines charged 3s. 6d. up to 15 lines 5s., which covers cost of insertion from order till date of show. Cash should accompany orders for insertion.

August 31, 1922.—Winchester Domestic Live Stock Association Show. Schedule of Honey Classes Open:—Class 5, one shallow frame; Class 6, six sections of 1922 honey; Class 7, six 1-lb. screw stoppered bottles of 1922 honey; Class 8, trophy of bee products to be arranged on table space 3 ft. by 3 ft.—Entry Forms to be obtained from M. W. Castle, 60, High Street, Winchester.

September 2, Corn Exchange, Rochester.—Medway and County Bee-keepers' Association, in conjunction with the Allotment Holders' Vegetable, Fruit and Flower Show. Eleven Open Classes, including trophy, for which a silver cup is offered. Entry fee for open classes, 1s. each.—Schedules from Mr. A. R. Castle, Y.M.C.A., Maidstone Road, Rochester. **Entries closed.**

September 2.—Peterborough, Oundle and District Bee-keepers' Association. Show of honey, Co-operative Hall, Peterborough. Members and Open Classes. Open (entry fee 2s.), 12 bottles Extracted Light Honey, first prize, £1 10s.; second, £1; third, 10s. Gift Class (entry free). Bottle Extracted Honey to be sold for N.U.R. Orphan Fund. First prize, W.B.C. hive; second, Appliances 15s.; third, 7s. 6d.—Schedules and Entry Forms, G. H. Seamer, Hon. Sec., Waterloo Road, Peterborough. **Entries closed.**

September 2.—Middlesex Bee-keepers' Association, in conjunction with the Fête in aid of Hospital. Show of Honey, Wax and Appliances. Open Classes for shallow frames, sections, and extracted honey.—Schedules and Entry Forms from Mrs. Hodson, Harley Lodge, Private Road, Enfield.

September 6 to 9, at Moor Park, Preston.—Royal Lancs. Show. Seven Open Classes.—Schedules (please state "Honey") from Reg. O. Bradbury, Secretary, Derby House, Preston. **Entries closed.**

September 9.—Middlesex Bee-keepers' Association, in conjunction with the Brentford Allotments Association Annual Show, at the Wesleyan School Hall, Clifden Road, Brentford. Twelve Open Classes for Honey, Wax, etc.—Schedules and Entry Forms from R. R. Babbage, 33, Whitestile Road, Brentford, Middlesex.

September 13, at Twickenham.—Twickenham Horticultural Society's Vegetable Exhibition. Honey exhibits under the control of Twickenham and Thames Valley B.K.A. Open classes for single jar and section.—Schedules from Miss M. Byatt, "Hawthorn," Hanworth, Middlesex. **Entries close September 8.**

September 14 and 15, in the Cattle Market, Newport.—Newport Allotment Holders' Association Utility Show, in connection with the Mon. B.K.A. Open Classes for Honey.—Hon. Secretary, Mr. J. K. Price, 37, Courtybella Terrace, Newport (Mon.)

September 16.—Moseley and King's Heath Horticultural Society and South Staffordshire Bee-keepers' Association. Five Open Classes for sections, light and medium honey in jars, also beeswax. Several Local Classes.—Schedules from H. C. Weston, 37, Pineapple Road, King's Heath, Birmingham.

September 16 to 22.—British Bee-keepers' Association Annual Show at Grocers' Exhibition, Royal Agricultural Hall, Islington, London.—Schedules from Hon. Secretary, B.B.K.A., 23, Bedford Street, Strand, London, W.C.2. **Entries close certain September 4.**

September 21 and 22.—Herts County Bee-keepers' Association, Barnet Branch, in connection with Barnet Allotment Holders' Association's Show. Open Classes for 3 1-lb. Bottle and 3 1-lb. Sections, first prize 20s., second prize 15s., third prize 10s.—Schedules from Norris S. Toms, 60, Fitzjohn Avenue, Barnet, Herts.

September 27. — Altrincham Agricultural Society. Largest one-day show. Several Classes for honey, etc., both open and local. Good prizes. Send one jar for Gift Class, to be given to Hospital.—Schedules from H. Turner, 1, Market Place, Altrincham.

September 28, 29, 30.—Kent County and Western Divisional Show at the Crystal Palace. Open Classes to United Kingdom (12 classes), Honey, Wax, Mead, Novelty, Scientific.—Schedules from Hon. Show Secretaries, W. E. Clifford, Southlands Road, or E. R. Seadon, Stanley Road, Bromley, Kent.

October 4 and 5.—The Society of the Four Northern Counties limited to Cumberland, Durham, Northumberland, Westmorland, Congress and Fruit Show, also Bees and 15 Classes for Honey, to be held in the Market Hall, Kendal.—Schedule for Honey Section from G. Chatham, 18, Stramongate, Kendal. **Entries close September 27.**

October 12, at Ongar, in connection with the Ongar and District Agricultural Association.—Extracted and Comb Honey. Open to Essex.—Schedules from G. A. Taylor, Hon. Sec., Ongar and District Bee-keepers' Association, Ashcroft, Ongar.

Special Prepaid Advertisements
One Penny per Word.

Advertisements must reach us NOT LATER than FIRST POST on MONDAY MORNING for insertion in the "Journal" the same week.

Trade *advertisements of Bees, Honey, Queens, and Bee goods are not permissible at above rate, but will be inserted at* **1½d.** *per word as* **"Business"** *Announcements,* immediately under the *Private Advertisements. Advertisements of Hive-manufacturers can only be inserted at a minimum charge of 6s. per ¼in., or 12s. per inch.*

PRIVATE ADVERTISEMENTS are only intended for readers having **Surplus Stock** *to dispose of.* **Driven Bees, Nuclei,** *and* **Queens that are reared or imported for sale,** *are Trade Advertisements, and can only be accepted under trade terms. A charge of 6d. extra per insertion will be made if a box number is used.*

Orders for three or more consecutive insertions in "The Bee Journal" entitle advertisers to one insertion in "The Bee-Keepers' Record" free of charge.

Will advertisers please read these Rules carefully in order to save trouble, as they will be strictly adhered to?

PRIVATE ADVERTISEMENTS.

APIARY FOR SALE.—Twenty healthy Stocks, 1922 Queens; purchaser to remove; if bought in one lot £5 allowed towards expenses; inquiries and inspection invited.—ASHWORTH, Pound Street, Warminster. r.h.143

WALLFLOWERS, "Golden Monarch," large bushy plants, 3s. 6d. per 100, carriage paid.—GRUBB, Marks Tey, Essex. h.144

NEW GEARED EXTRACTOR, by Steele & Brodie; never unpacked; cost 64s. 6d. month ago; receipt sent; removing. What offers?—CYRIL HARRIS, 33, Stoneleigh Road, Kenilworth. h.145

FEW young fertile Italian Queens, 6s. 6d. each. —MURLESS, Ruabon. h.146

WHAT OFFERS?—Five strong Stocks of Italian Hybrids, in hives, plenty of stores, 55 drawn-out Shallow Frames, 5 Section Racks, Extractor, Excluders; must be sold; purchaser to remove.—ELLIS, Laurel Bank, Swallow Street, Iver, Bucks. h.147

OVERSTOCKED. — Would sell few 10-frame Stocks of Italian and Italian Hybrid Bees, strong and guaranteed free from disease, £3 each.—COX, Talbenny, Little Haven. h.149

FOR SALE, Extractor, as new, takes frames or sections, 40s., carriage paid.—MEAD, 27, Godson Road, Croydon. h.150

OVERSTOCKED. — Strong, healthy 10-frame Stock Hybrids, 50s. ROWLEY, 17, Milner Road, Thornton Heath. h.151

QUEENS.—Few spare fertile young Dutch and Hybrid Italian, 5s. GORDON, Foxdale, Isle of Man. h.152

STOCK GEESE.—One gander, two geese (Abbot's strain), extra large birds; exchange good Extractor or Bees (no hybrids).—HOLMES, Hythe, Southampton. h.153

WALLFLOWERS, strong plants, red and yellow; Canterbury Bells, strong seedlings, mixed colours; all 1s. 100; Hollyhock, strong seedlings, 3d. dozen; carriage extra.—HEMMING, Appleton, Warrington. h.154

HEALTHY 10-frame Stocks with 1922 Italian-Carniolan Queens, £2; useful exchange considered.—ANTHONY, 34, Knavesmire Crescent, York. h.155

LARGE DUTCH SKEP, full to the bottom, £5; exchange Pullets or Bee Goods.—LAW, 39, High Street, West Melton, Rotherham. h.164

A FEW 1922 Italian-Dutch Queens to spare (uniting up), 5s. 6d. each.—STONELY, Wrexham. h.165

PURE Light Cambridgeshire Honey for Sale, 1s. 3d. per lb.; tins and carriage free if 1 cwt. purchased; sample 4d.—Tithe House, Wilburton, Ely, Cambs. h.166

GARDENER (Under) wanted to look after herbaceous borders, lawns and rose garden; one with knowledge of bees preferred; 33s., with bothy, coal and light.—Apply, giving age, experience and references, to J. T. McLAREN, JUNR., Saltoun Estates Office, Pencaitland, East Lothian. h.123

EXCHANGE for good 12-bore Double Gun, Bees in new C.D.B. hives with one shallow frame crate, one rack sections complete, also Extractor, geared.—Sunnydale, Willingham, Cambs. h.125

HEALTHY STOCKS Dutch Hybrids, 50s.; Simmins', on commercial frames, 75s.—Beecn Cottage, Longton, Preston. r.h.83

20 SUBSTANTIAL HIVES for Sale, now in use, replacing with W.B.C. pattern, offering cheap.—SPECK, South Yardley, Birmingham. r.h.87

BEES.—Five healthy, strong Stocks, Italians, excess of requirements, being offered.—SPECK, South Yardley, Birmingham. r.h.88

SURPLUS.—Bottles, Extractor, Feeders, etc., new, carriage paid. Write for particulars.—SPECK, South Yardley, Birmingham. r.h.89

FEW good fertile Hybrid Queens, 6s. each.—ADKINS, Highmoor, Harpenden. r.h.85

THE World's Famous Raspberry, Lloyd George, perpetual fruiting, 30s., 50s., 60s., and 70s. per 100.—J. J. KETTLE, The Violet Farm, Corfe Mullen, Wimborne, Dorset. h.78

SELL.—Two small powerful Acetylene Brass Head Lamps, with separate generator, suitable light car or cycle car, £3 the set; Mills' Automatic Acetylene Generating Plant, suitable for 10-roomed house, £6; quantity of Acetylene Gas Brackets and Chandeliers, prices with particulars; all carriage forward.—HERROD-HEMPSALL, Old Bedford Road, Luton, Beds. c.77

WANTED, small Pump for tank in greenhouse.—Price and particulars to W. HERROD-HEMPSALL, Luton, Beds. f.108

FINEST ENGLISH HONEY, quality guaranteed, in 28-lb. tins, 1s. 3d. per lb.; tins free; f.o.r.—HARVEY, Apiarist, Andover. r.h.76

DISSOLVING PARTNERSHIP.—Sale, Hives, new this year, double walled back and front, painted, single brood box, 25s.; double brood box, 30s.; Bees, 7s. 6d. per comb, with Queen; carriage forward; c.w.o.—LACEY & EARL, Orchard Apiary, Anstey Lane, Leicester. h.118

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THE WISE BEE-KEEPER looks for quality. The South Hampshire Apiaries breed only from the very best strains. Result: Quality and satisfaction. Beginners' Outfits from £5.—All communications, H. E. NEWTON, New Milton, Hants. (h)

TWO STOCKS BEES, 10 frames, £2 each; Driven Bees, 10 more lots, 10s. each; not less than 3 lbs.; your boxes.—DAY, "Vine Cottage," Exning. h.148

FERTILE PENNA QUEENS, 6s. 6d.; Hybrids, 6s., per return.—GILBERT STONE, Chelsea Road, Easton, Bristol. h.163

NATURAL-RAISED fertile 1922 Queens, 5s.; six, 27s. 6d.—WOOLDRIDGE, Toddington, Winchcombe, Glos. h.167

HONEY FOR BEE-FEEDING. — Australian, 60-lb. tin, 35s.; 8 lbs., 7s. West Indian, 56 lbs., 35s. 6d.; 7 lbs., 8s.; a cheaper quality, 60 lbs., 30s.; carriage paid; reduction quantities; samples on application.—LONDON TRADING AGENCY, 32, St. Mary Axe, London, E.C.3. r.h.115

MAKE YOUR "W.B.C." HIVES.—Simplified Working Drawings, novice can understand, 2s. 6d. Saves you pounds.—CANDY, 28, Dovey Road, Moseley, Birmingham. h.156

GRAFTON ITALIAN QUEENS.—Fertiles, 7s.; three, 20s.; return post. — MASOM & HEDLEY, Grafton Regis, Stony Stratford. h.157

HEALTHY DRIVEN BEES, 7s. 6d. per lot; immediate delivery; carriage paid; would exchange young Apple or Plum Trees, Gooseberry, Currant Bushes, Raspberry or Strawberry Plants. —W. BARNES, Briarhaven, Duchess Drive, Newmarket. h.158

FERTILE ITALIAN QUEENS by return (weather permitting), 7s. 6d.; Hybrids, 5s.—TICKELL.

CANDY.—7 lbs., 7s. 6d.; 10 lbs., 10s. 6d.; post free. — TICKELL, Westbourne Apiary, Cheltenham. h.159

TO HONEY PRODUCERS.—Excellent Tins cheap, handles, bolted lids; 7 lbs., 10d.; 14 lbs., 1s. 2d.; 28 lbs., 1s. 9d.; forward.—BOWEN. h.160

PACKAGE BEES.—Good lots to strengthen weak stocks, with Italian Queens, 12s. 6d.—BOWEN. h.161

STRAW SKEP STOCKS, ideal for early swarms, 25s. each.—BOWEN, Coronation Road, Cheltenham.

STRICTLY BUSINESS.—6 lbs. Flavine—S. B. Candy, 7s.; 10 lbs. Flavine Honey Sugar, 10s.; 10 lbs. Autumn Sugar Syrup, 8s.; all carriage paid to any address in Great Britain.—S. H. SMITH, 30, Maid's Causeway, Cambridge.

HEALTHY Driven Bees, 10s. per lot; boxes and carriage free.—JAMES PITTS, Bretforton, Honeybourne, Worcs. h.168

HONEY, in 60-lb. tins; 30s., f.o.r.; sample, 6d.—COBB. r.h.169.

CANDY, 4 lbs., 4s. 6d.; 10 lbs., 9s. 9d.; larger orders, 9d. per lb., f.o.r.—COBB, 33, Bevan Road, Plumstead. r.h.169

SPECIAL OFFER.—1922 Queens; Hybrids, 6s. 6d.; Imported Italians, 8s.; Imported Carniolan, 9s.; until sold; safe delivery guaranteed.—C. T. OVERTON & SONS, Crawley, Sussex. h.170

FERTILE DUTCH QUEENS, 1922, natural bred, 5s. 6d. each, by return.—E. LANG, 124, Canterbury Street, Chorley, Lancashire. h.126

ITALIAN QUEENS OF GOOD STRAIN (fertile, 1922), 5s. 6d., post free.—MIDDLETON, New Oscott, Erdington, Birmingham. h.127

IMPORTED ITALIAN QUEENS, Penna or Tortora, 6s. 6d.; prompt delivery; 8-frame Stocks, 45s.—HENSLEY.

BOTTLES! BOTTLES!! BOTTLES!!!—Pound screw-top, caps and wads, 29s. gross, or 3s. dozen.—HENSLEY, Luton Apiary, Chatham. h.129

FEW imported Italian Queens, 1922, 5s. each.—COBB. r.h.113

HONEY BOTTLES, 30s. per gross, 3s. per dozen. —COBB, 33, Bevan Road, Plumstead. r.h.114

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From September 1st until countermanded: one queen, 7/-, two queens at a time, 12/-, 4 queens at a time, 18/-. Orders booked in rotation; cash with orders, carriage paid, safe arrival guaranteed. Payment by cheque or British Postal Orders. International money orders are *not* accepted.

ENGLISH HONEY wanted, any quantity. State lowest price.—Box 88, B.B.J. Office, 23, Bedford Street, Strand, W.C.2.

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FOR SALE, two 4-comb Nuclei, Italians, 30s. each; carriage extra; box 10s., refunded on return.—HERROD-HEMPSALL, Apiary, Luton, Beds. g.112

TO ALL SECRETARIES and BEE-KEEPERS.—Send to me for samples of Honey for autumn feeding.—F. GOODRICH, 10, Weston Park, Crouch End, London. h.106

FERTILE ITALIAN QUEENS by return (weather permitting), 7s. 6d.; Hybrids, 5s.—TICKELL.

JACK TICKELL.—For Queens, Stocks and Nuclei. List free. — Westbourne Apiary, Cheltenham. r.a.54

7/- ITALIAN QUEENS, beauties, giving magnificent colonies heavy storing bees.—ATKINSON, Fakenham. r.h.42

TORTORA QUEENS.—Address, E. TORTORA, Ozzano Emilia, Bologna, Italy. Special offer for August for no less than two Queen Bees. Special conditions to wholesalers. r.g.91

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CHOICEST ITALIAN QUEENS BRED; great workers. "Your queens have done the best of all I have this year," writes N. The Queens up again with my fine Queens, 7s. each.—ATKINSON, Fakenham. r.h.45

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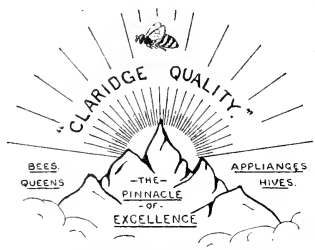

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Medicate your syrup by thoroughly stirring into it when cool enough to insert the finger, two teaspoonfuls of "General Bacterol" to each pint of syrup.

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The Bee-Keepers' Calendar.

SEPTEMBER, 1922

7 Thursday. "And there the golden bees shall come
In summer-time at break of morn,
And wake us with their busy hum
Around the Silia's fragrant thorn."
Thomas More, "My Garden."

8 Friday. "When bees did roar like midget bulls,
Or quietly rob nodding flowers—
We two did roam the fields so green,
In summer hours."—*W. H. Davies, "In Days Gone."*

9 Saturday. "And glossy bees at noon do fieldward pass."
Keats, "Isabella."

10 Sunday. "To home and country they alone are true,
And, mindful of the winter soon to come,
Work hard in summer, to the common store
Contributing their gains."
Virgil, Georgics, Book IV.

11 Monday. "She was the smallest lady alive,
Made in a piece of Nature's madness,
Too small, almost, for the life and gladness
That over-filled her, as some hive
Out of the bears' reach on the high trees
Is crowded with its safe merry bees."
Browning, "The Flight of the Duchess."

12 Tuesday. "Stands the church clock at ten to three?
And is there honey still for tea?"
Rupert Brooke, "Grantchester."

13 Wednesday. "If bees fly far from home there will be fair weather, if they remain in the hive look for a storm."
"*Weather Wisdom.*"

Seasonable Hints.

Reports from most parts of the country show that on the whole the honey harvest is a poor one, and much feeding will be needed. We have during the last three weeks examined stocks in widely-separated places in the Southern part of the country, and not one has had more than three to four pounds of stores in the brood chamber. There is still of course a possibility of this amount being increased from late flowers *if the weather is favourable*. It will, however, be wise not to trust to that, but to give syrup at once. This will not only provide stores, but cause breeding to continue and the stocks will benefit by the young bees so necessary for successful wintering and prosperity in the spring.

So far as we can hear, bees have not done well on the moors. The heather in some places has not bloomed well, and where it has the weather has been too wet and cold for the bees to work it.

A Dorset Yarn.

"'Tis not in mortals to command success,
But we'll do more, we'll deserve it."

Most of us bee-keepers set out each season to get a large surplus of honey; we do not always get it, though we "all deserve it," because we at least try for success. We cannot "command it," because the seasons some years are against us, but some get a very large surplus of honey even in the bad years.

I had this brought to my notice on the last day of August, when I went to help Squire Tomlinson with his clearance boards, in preparation for extraction. Those who have "had some" will know it is no easy matter to lift off three boxes of standard combs and two shallows and get on the clearer board, then place them all back accurately to get a perfect clearance. The standard boxes of filled combs seemed to weigh ½ cwt. each. One of the shallows was not full, and this was left on the top of brood chamber, with clearer board over; so many bees must have a place in which they can stay at night and on dull days. The three hives I helped him with certainly was a "deserved success." He had only three clearer boards and could not do the others; but if all work out as these sky-scraper hives did he will have some hundredweights of honey. In none of them was there any brood, but in our lot there was some in the standard combs used for surplus.

I am close to the heather, but he is too far from it; his bees had confined the late brood-rearing to the brood box proper. Ours, close to the heather, were still rearing brood in two brood chambers. By helping him I was able to see that even in autumn plenty of nectariferous flowers, plenty of food coming in, makes the queen keep on laying eggs in quantities, or she would not be laying in two lots of standards. One of them had quite a small queen with very young brood. The clearer is between the two boxes, but as the lower lot is still carrying pollen, I can assume that there is a queen in each of them. This was a June swarm, which again sent out a big swarm early in August; they have raised two queens, and each has mated, one gone into one brood chamber and one in the other. One queen was brought up from the valley apiary, was taken back, but one was laid out dead on the alighting board the next morning.

This is a new experience with me; I have in other years found a young virgin queen in a rack of sections that would not go through the clearer board, but to find her up with a lot of bees refusing to go down in the next chamber, and those below still carrying pollen is a fresh experience. Still it may have happened before, because if they have not all gone through, man does not wait their pleasure, but will take out the combs and shake them off in order to extract all together, then the queen may be shaken off with the bees. My friend, Squire Tomlinson, shook each comb of one lot, but the next morning when we commenced extracting there was a line of bees working between the last comb and the side of the brood box; the other combs of honey were bare of bees, but the queen must have been on the side of the box as the combs were shook, and she stayed with attendant bees all night, but it seemed hard to find her dead the next morning. This queen made a bid "for success," but the rule of the communists is only one queen at a time, so one had to go under, but the other two are still one above another.

Most of us speak of bees how, when stealing the honey from the flowers they will in return perfect the pollination, but it is not so with the antirrhinum family. When out at a political garden party in the beautiful pleasure grounds of the wealthy, with Mr. Organ, another bee-keeper, we watched the bees in crowds over the beds of bright coloured snapdragons. The bees never entered the flowers to get the honey, but had drilled a small hole in the base of the flower that had the nectar, an instance of taking without pollination, but these flowers will fertilise themselves, as the two organs grow up together like the pea family, and are self-fertile. This was so with every flower—all had a small puncture, and the small bumble bees went for the nectar in the same way. It was only the heavy bumble bee that entered in the correct way; they were able with their weight to force open the flower to get the nectar or pollen. Florists like to keep these flowers true from seed, so it would only be by these large bees that any variation of colour could come from the seed.

We were both interested in the habits of bees, so we sat at the back of the gathering talking bees, and listening to the artistes, who were there to amuse before the political turns came. One will get a lot of pleasure out of life by meeting these older bee-keepers, and when they lay out to talk of bees and their wonderful economies, they will speak of the plants they have noticed, and the books they have read, and will forget that they were one of the turns in the political programme; but with bee-keepers it is the craft first and always, everything else is of lesser importance. Still it's a funny old world, and we find a lot of pleasure in the small things around us. Those bees knew that the good things for their well being were stored there, but they could not get into the flower by pressing open the upper and lower parts so made a puncture just where the nectar was stored. Many years ago I saw the wasps bite into the tubes of the torch flower to get at the nectar, but had never seen bees bite their way into them, but others may have seen it; bees certainly got something from the flowers of snapdragons—"they commanded success" and "deserved it."

We find the bees are working the flowers of single asters. We have a great stretch of them in two parts of the farm. At the glass houses where there is also mignonette, bees are even more with the asters than at the farm; but by far the greater part of bees are on the heather. We have just cut another 10 acres of grass, that had a great many flowers of Hieraceums, I see them on the senecio's, and sweet thistle; when fine for a few hours they still sing away merrily.

Visitors still come. One from the Southampton area on Friday; Mr. Morgan, from Bristol; Mr. Fairbrother, from the Manchester district, on Saturday—he is a fruit-grower as well as a bee-keeper, and had motored through the fruit districts of Worcester, Gloucester and Devon. He had come from Teignmouth, near Torquay, Devon, since lunch, over 100 miles, to the farm, and he wanted to see Bournemouth that night (Saturday), start for Manchester Sunday morning, and get there for tea. He is one of the hustling visitors, and he and his wife are certainly seeing a lot of England in a very short time. Still, we were pleased to see them; they are trying for success in their holidays—we'll hope the weather is kind to them. The visitor from Southampton is a grower, and his pleasure is visiting other growers, from place to place all round the Bournemouth area, where he is staying for a short holiday. He was interested in the great weight of honey. He asked if it was a "side line," but I assured him it was "the greatest asset on the farm."—J. J. KETTLE.

Jottings from Huntingdonshire

When I see the corn marigolds growing in clumps along the roadside and their seasonal friends, the ragworts, and hawkweeds mixing their colour of yellow with the knapweeds purple and the spear plume thistle, while nearer the ground the wild mignonette grows apace with the rock rose, the toad flax and the shepherd's purse, brightened here and there with the blue succory and cranes bill, all decorated with those gypsophila-like plants, the bedstraws, I ask myself "Is the honey flow over?" and reply "No." Look at these garlanded roadsides, nature's herbaceous borders, and number, if you can, the varieties of flowers now blooming. Look, here are traveller's joy and convolvuli rambling with the vetchlings over every hedge, dark mullein startling every visitor from the towns, calling forth the query, "What flower is that?" As for the teasels, they are everywhere, with the beautiful, yet poisonous, plants of the hemlock family. The myrrh and spikenard, too, are here, the latter testifying, like the mullein, to the presence of chalk in the subsoil. Many fields are still pink with—to give it its true name—wrest harrow, while the wood spaces are resplendent with the willow herb. Dear bees, what a choice you have!—if only you could get to work. Five nights ago the night was hot, almost tropical; the next morning the bees were up before the sun. Forth they went, and back they came; how happy they were! Alas! the very next night was cold and chilly, and the following day, though warm, was of little use; as soon as the nectar rose, rain fell, and our friends had to scurry home. The Dutch bees alone discarded the showers and went on gathering. How disappointing to see so many flowers which open and fade unvisited by a single bee. Clovers are flowering, and the right weather would mean five pounds of nectar per acre for a fortnight; and there are ninety acres of it, alas! Should an anti-cyclone visit these isles and September be as warm as May, would the hives be filled with clover honey? I fear not. Another sight catches my eye. Some fields, a hundred acres in all, have been sown with mustard as green manure, but, owing to the lateness of harvest, the plough has not got to work, and so the mustard is flowering. Thither will the bees fly when they can. Well is it. Personally, I wish nothing better than that my bees may go into winter with ample stores of mustard honey. For the present, half my stocks are being fed. The sooner this artificial feeding can cease, the better I shall be pleased. Supers will soon be moved, even from the Dutch stocks, and the bulk of honey will be small; the marvel is there should be any at all. Queens are doing their best under the circumstances. Those of us who have golden Italians will rejoice to see how faithfully they keep the hives occupied; on the other hand, the Carniolans seem absolutely nonplussed. In the spring they brought in nectar faster than any, but now they are at a loose end. Had I only Carniolans, I would never feed over the brood nest, but do all stimulating from the outside. They are a handsome bee, very hardy, almost immune clever workers, and can cap sections perfectly, but withal they are outwitted by such a summer as this. Their indifference to propolising is a great point in their favour, and they are the only bees I can open up and show to anyone without first suggesting a veil. The hybrids are willing enough to work, but seem unable to keep going, while the Italians have managed somehow to keep the flag flying (excuse the metaphor), and the Dutch have gathered surplus. One stock of Dutch bees has gone under. To oblige a friend I took the queen away and left them to raise another; this they refused to do, and, of course, the fertile workers came along. A frame of comb containing brood and two sealed queen cells was given to them, but neither queen was given permission to stay. The fertile workers held sway, spoilt all the combs, choked the hive with drones, and when I was on my holidays the workers turned the drones out—an unusual thing when a queen is absent—and presumably huddled together on the floorboard and died. —E. F. HEMMING, Steeple Gidding.

Week-End Bee-Keeping

By S. H. SMITH, Cambridge.

(*Continued from page* 425.)

The old country is not played out yet, D.B., in spite of criminal taxation by decayed home or corrupt alien politicians. There is no better place to use your talents and capital than in the development of your own country. Bees, flowers, and fruits have given many a good worker health and happiness. You must read those interesting "Dorset Yarns" that have been appearing in the "B.B.J." during

the past five years. The writer is a lover of nature and of his fellow men. During all these years he has not written one spiteful line or penned one venemous word. Good, Mr. Kettle! May you long enjoy the murmur of the bees amid your fragrant flowers!

There are several ways of making a little money out of bees, D.B., but you will not learn all about them in one season. Bees increase naturally so fast that you must sell some or else invest more capital to house them. You may raise and sell bees, run apiaries for honey, or combine these activities. The honey harvest is sometimes scant in England. The quickest way to turn your money in bee-keeping is to sell bees early in the year. That is why, old man, I am trying to show you this method first.

A skep apiary is cheaper and easier to run than a frame hive apiary, but with a given number of skeps you will not make as much money as you would out of the same number of frame hives.

In the spring all bee-keepers aim to gear their apiaries to an even rate so as to have all stocks of a like strength. When a skep booms too much you simply move it to the stand of a weak lot and put the weak skep in its place. The strong skep is damped down for a time and the weak skep, reinforced by a large number of flying bees, soon becomes strong. By the time you have juggled the skeps about a bit and made three stocks out of two, you would have arranged shipping dates for certain skeps and be supering the rest.

We need large skeps with holes in the roofs. Using pieces of excluder zinc over the holes, you may apply the Demarce plan to skeps. When you cut out a piece of brood comb from a skep you insert it in one of our little frames and put this into an empty skep. You may then place bee-filled skeps under or over them, the same way we work double brood chamber stocks.

When the doubled skeps fill up with bees and brood you divide them, give the queenless parts young fertile queens and super, or sell, as with frame hives. In an early season I prefer this way of starting the wheels going to the A.B.C. plan. Then, when nectar is pouring in, you may go ahead and make three stocks out of two skeps.

Bless me! I could go on enlarging on this subject for a long time. But let us get at 'em. Whenever I see a skep, D.B., my fingers itch to make something more out of it than a mere old swarming basket. "A swarm in May is worth a load of hay." Tut! I would not give you much for any swarm. A good, strong stock in two to three brood chambers in May is worth half a dozen of your old swarms. "A swarm in June is worth a silver spoon." Pish! If you know enough to prevent bees from swarming in June, D.B., you may dine off silver plates. Between rounds, to ease your conscience, you might throw a silver spoon or two out of the window.

We need the smoker, hive tool, a couple of empty skeps, one of those little S.H.S frames, the driving irons, the comb-cutting tools, a linen duster, and that rolled up sheet. We can pick up a moving board and a skep floorboard on our way back.

Ready? A puff or two of smoke, the hive tool ungums the straw-rim, and over she goes like a turtle on its back. A little smoke over the combs—and where are your bees?

Of course they have all gone down to the honey cells near the roof and they are lapping up nectar as fast as they can. Peer down between the combs and you can see them. There is plenty of brood, drone as well as worker—and there is a queen cell, D.B.—and there is another. Both are sealed, and the tips are roughened. The bees gnaw the ends of the cells when the queens are due to emerge. This skep would have swarmed in a day or two. We have got there just in time to cut out the queen cells. There are three more, not yet sealed. Out they all come.

We will now drive the bees. An empty skep is placed like a lid, but tilted at an angle, like you saw it in the book, and we skewer the rims of the skeps together at the point toward which the combs run. The irons are pushed into each side to hold the lid steady. The duster goes at the jointure at the back and the ends are tied around the irons. This allows the bees a wider runway upstairs.

Now we drum at the back and front with open hands, a gentle rat, tat, tat. The bees begin to move upwards. Watch out for the queen, D.B. I want to clip her wings. We shall, of course, get another chance at her when we dump the bees on the sheet to let them run into the other skep when we have cut out a piece of comb, tied it in the little frame, and clinched this in the roof of that skep.

Certainly, catch her if you can. Aim an inch or so ahead of her so as to get her by the head, thorax or wings. Good shot! Hold her a minute while I get out my scissors. What's the matter?

Don't worry, D.B., she is not dead. It is a case of catalepsy—common to many insects when touched or handled in certain ways. You know how in our boyhood days we watched spiders, beetles, and wood lice curl up and "play dead," as we called it. Queen bees sometimes act the same way.

(To be continued.)

Re editorial note last week.

The pieces of comb do not go back. A piece of comb when cut out of a skep is tied in a little frame, and this frame is clinched to the roof of another skep, by the 2½-in. nails driven through its top bar. The driven bees are run into the skep with the comb in the frame.—S. H. S.

[But, Mr. Smith, you said of skeps: "They are really as simple to investigate and handle as frame hives, if you go at them right." We fail to see it. With a "frame" hive one can take out any and every comb without cutting them, or unclinching nails, see right down into every cell not filled with a larva, honey, or pollen, and replace it in the same hive.—Eds.]

Cornish Chit-Chat.

I don't know what bee-keepers in the fruit districts of the county will say, but here in Mid-Cornwall the season may be written down as the most trying one on record; so much so that one needs to add to the old-time rhyme :—

"A swarm of bees in May is worth a load of hay;
"A swarm of bees in June is worth a silver spoon;
"A swarm of bees in July is not worth a fly;
"A swarm of bees in August fills the bee-keeper with disgust."

Of the latter I have had several, including one to-day, August 16, weighing 8lbs., and I am beginning to wonder who is going to complete the rhyme for September.

Summer in April and May produced unprecedented numbers of swarms in the latter month, but a spring-like weather ever since has simply kept the bees breeding, without clogging the brood nest or filling the supers with honey.

With reference to Paragraphs 10670 and 10663, "Number of Queens to a Swarm." In June I took three queens from a second swarm, and the next morning found seven others dead on the floor-cloth, which, with one remaining, makes eleven, which I think is a record.

Again, with reference to Paragraph 10666, page 343, "A Breathing Cure for Bee Disease." I am wondering if the following accident means a cure :—

A newly-fixed swarm, headed with a 1921 queen, developed crawling badly about three weeks after hiving, and I quickly gave them a strong dose of burning sulphur, intending destruction, at the same time shutting up the hive. The next day was Sunday, and I let them be. The following day I was called away, so did not get at the hive until Tuesday, when I noticed bees coming through the quilts. This I closed down, and opened the hive front, clearing out a few thousand dead bees, and the active ones began to fly freely, clearing out dead bees and grubs. This was two months ago, and there has not been a crawler since, but good work going on when the weather is conducive.—J. M. BEST.

Staffordshire Valleys.

What changes take place amongst the stocks in the course of a few weeks. That which promised to be a season of flowing honey came to an abrupt end in the latter part of June. Before this bees were pattering in like raindrops on the alighting board, and many were the preparations that were made for Golden Store; how happy they seemed to be after the waiting of early spring. New homes appeared in view, extension and increase were rapidly bringing a crisis. Some would not be denied, and had their annual outing to find another home. I am sorry that many swarms have been lost by starvation. The sudden change of weather stopped the supply of nectar, and empty cells soon did the rest. Why do so many neglect their swarms? The "Guide Book" is very emphatic on the point: Feed your swarms slowly until you are assured that the income is more than the expenditure. I am thinking that unless the weather changes quickly it will be a year of giving, not taking. Keep an eye on all swarms or you may lose them. Yes, and some stocks, too, the cupboard is fast becoming bare. Down in the cosy valley the bees have done well. They have plenty of stores, and some have a good quantity of supplies. Nuclei have grown strong and will winter well. We walk to the top of the hill and see the Shropshire mountain, "The Wrekin." What wealth we view in pasture and woodland and growing crops. What a panorama! An ideal spot for quietness amidst nature—five miles to the nearest station. Very few motors pass; they go by on the main roads and miss these beauty spots. Here in the little chapel we see some beautiful oak. The pews and panelling all made from one huge oak. The church near by with old-fashioned pews made of oak, but the backs are so high that unless one sits upright one cannot see the vicar. One can nod with safety, but not snore.

The honey from the fruit is of beautiful flavour and aroma. Density is there, too, but it is not bright. I have extracted about twenty-eight standard combs, but I hope we shall get some clover. The bees are busy on it, and the blackberry flowers, too, when the sun shines. Well, everybody cheer up. We shall look forward to a good year in 1923. "Hope springs eternal in the human breast," and especially so with bee-keepers who love the craft for its own sake.

North Stafford. W. J. PALMER.

Notes from Ayrshire.

The season is slipping past with no redeeming features. The bees just managing to live, and very little more, and now, when we have passed the middle of July, it will only be a small chance if we get any surplus honey at all. The dark honey gathered early has very much of it been carried down because of scarcity, and used to keep stocks going. Swarms have been general and very peculiar; in one case of a neighbouring bee-keeper three stocks swarmed simultaneously and joined into one enormous swarm, which was ultimately hived into one hive. One just wished for a fortnight of good weather that it might show us something, but that has not yet arrived.

Another feature of this season has been that young queens have taken a very long time to begin to lay. Some I have seen eight weeks hatched, and no eggs. Others longer, and only beginning to lay. Very careful watch will require to be kept in case some of them are drone breeders. This is surely a season in which a very much larger proportion will fail to mate from one cause and another, and I just desire to pass on this warning, specially to Scotsmen. I take it that conditions have been a little better over the border, but as Mr. Kettle says often, "Hope springs eternal," and hope of better things is the star in the east. AYRSHIRE.

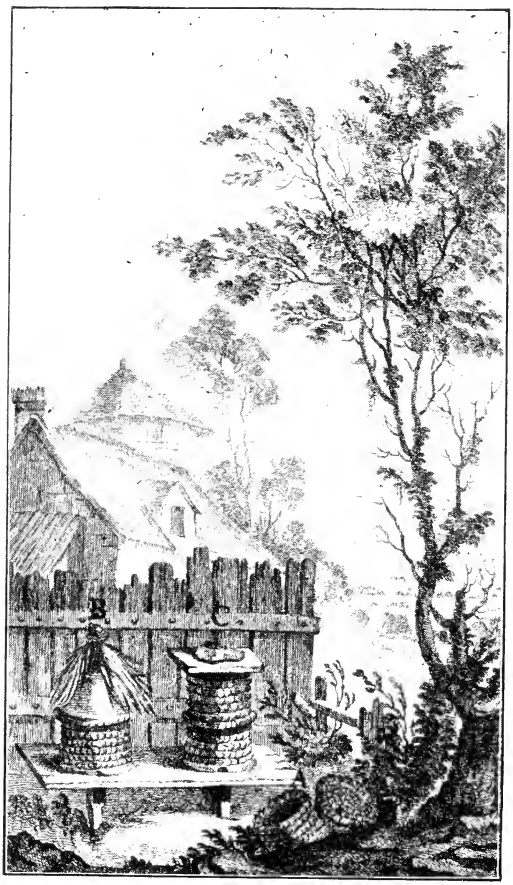
John Geddy, of Hilltown, Falkland.

By Lieut.-Col. H. J. O. Walker.

(*Continued from page* 402.)

THE RUCHE ECOSSAISE (Scottish Hive) and its relation to that of Jacques de Gelieu and to Gedde's "Transparent Octagon."

Jacques de Gélieu came of a Swiss family of bee-keeping pastors, and died in the same faith at Verrieres-Suisse in 1762, leaving a son Jonas. In 1816, Pastor Jonas, then full of years, published "Le Conservateur des Abeilles," an English translation of which, by Miss Graham Stirling, of Duntrune, appeared anonymously thirteen years later in Edinburgh. Pastor Jacques used a tiered wooden hive of his own devising, and in his day, and even as far on as 1862, as may be learned from a letter of Pastor Bernard de Gélieu to the Paris "Bee Journal *l'Apiculteur*" in that year, p. 42, the family believed him to be the original inventor of the tiering system. They were greatly mistaken. In a practical little work, "Traité des Mouches a miel," anonymous, Paris, 1680, tiered hives, both of wood and straw, are figured and described as being in common use in the French districts Le Poitu and Le Limousin. That they were on trial in England full five-and-thirty years earlier still we have already seen.



Of Jacques' contemporaries scientifically interested in bees, the most highly esteemed was De Réaumur, and to him in the year

1756 Jacques wrote describing his system, on which a correspondence ensued, followed by the despatch of a model hive. There was then in Brittany, flourishing under Royal Letters Patent, an Association entitled La Société d'Agriculture de Commerce et des Arts, whose Annual Reports (Corps d'Observations) were published in Paris, and one of the members, Count de la Bourdonnaye, keenly interested in bee-keeping, was a friend of De Réaumur. In the Report for 1758-59, part of a letter from De Réaumur to the Count was published, speaking favourably of De Gélieu's "manner of working for the multiplication of bees," mentioning also that De Gélieu had applied to Cardinal de Fleury for a patent to work it in France, or for some other reward. A model hive having been obtained by the Society, the Count at once decided that it would be too costly for peasants, so he substituted straw cylinders for De Gélieu's wooden boxes, and the hives thus altered were sent out to various districts for experiment.

Pastor Jonas, in the preface to his "Le Conservateur des Abeilles," 1816, assures his readers that the only objection taken to his father's hives was their cost. Except in a very limited sense, that is, unless the change effected by the Count be deemed to put an end to the De Gélieu hive, this cannot be accepted. The year's reports were unfavourable, the gravest objection being that it was necessary to pass a wire *through all the combs* before the top storey could be removed, and that the resulting flow of honey was prejudicial, and often fatal, to the bees. For this defect alone, the Society, the Count concurring, "felt bound to warn at once the public not to use the hive." In the absence of any detailed description of the De Gélieu boxes, this report is useful, since we now know they had neither top nor bottom. They perhaps had internal cross-pieces to support the combs.

In hope of finding hints for further improvement, De la Bourdonnaye was examining the various hive systems of the day, when in the *Collection Académique de Mémoires Étrangers*, published that year, 1757, in Paris, he found a translation of Art. 96, Vol. VIII., Philosoph. Trans., London, 1673, which described, as already has been mentioned, the hive claimed as his own by John Gedde in the 1st Edition of his Treatise, London, 1675. Here was what he wanted: a tiering system in which the disadvantage of having to sever combs was avoided or reduced to a minimum by the addition to each compartment of a roof bearing a small passage hole, so that when in March, 1759, the Count presented the Society with a fresh hive made on this principle he christened it The Scottish Hive in acknowledgment of the source of his inspiration.*

In the plate here reproduced A shows the top of one and the bottom of another compartment, with an additional wreath of straw added to the edges of each so as to ensure a stable joint; B, a colony in a common skep placed for transfer over a compartment; C, the hive duly stocked, a useful cottager's hive that perhaps still lingers in Brittany. P. Duconédic used it with due acknowledgment as the basis of his *Ruche Pyramidale*, Rennes 1806, Paris 1813.

As in France, so elsewhere on the Continent, John Gedde's energy had its effect. In the words of Johann Riem, an able critic (Bienen Bibliothek, Vol. II., p. 211. Breslau 1778), "From Gedde came an improved system of bee-keeping in England, France, Germany and other nations." The present appreciation has been written in the hope that it may keep fresh in the memories of British bee-keepers the fame of so worthy an old Master of their Craft.

* Le nom de *Ruche Ecossaise*, dont se sert M. de la Bourdonnaye est fondé sur ce qu'il a pris pour principe celle qui est décrite dans la Collection Académique, tom. 4 de la Partie étrangère, p. 39 (footnote to p. 259, Corps d'Observation for 1759-60).

Somerset Bee-keepers' Association.

INTERESTING PRESENTATION.

Ideal "Bee" weather favoured the Somerset Bee-keepers' Association for their garden party, held at Cannington Court on Saturday, Aug. 19th, by the kind permission of the Agricultural Instruction Committee of the Somerset County Council. Upwards of 120 members and bee-keeping friends were present.

On arrival a very hearty welcome was extended to the visitors by the principal of the college (Mr. James Mackie, M.A., B.Sc.), who, in an interesting speech, explained the objects of the institution, one of which was bee-keeping. He expressed his appreciation of being able to welcome, on behalf of the Committee, such an Association as the Somerset Bee-keepers' Association.

After suitable acknowledgment had been made by the Chairman of the Association, the party proceeded to the College Apiary, where an instructive lecture and demonstration in "Queen Introduction" was given by Mr. L. E. Snelgrove, M.A., M.Sc., and Mr. W. A. Withycombe, the county expert.

Mr. Withycombe, in a very interesting and instructive manner, gave detailed particulars of the old and new methods now generally followed, including the use of queen cages of Abbott, Sladen, and the Benton patterns, also the direct method of Simmins, and by making an artificial swarm of the colony to which the queen is to be introduced.

Mr. Snelgrove demonstrated his own method of introducing a new queen after her immersion in water, widely known as the "Snelgrove method." Whilst this ensures almost certain success, the two or three visits to the hive necessitated under the old methods are reduced to one visit, and the period during which the queen is not laying in the hive is reduced from some days to 30 minutes. Mr. Snelgrove withdrew queens from colonies in the College Apiary and introduced them in less than a minute to strange hives, and the success of his operation was seen much later in the afternoon, when the

queens were all found quite happily settled in their new quarters.

At the close of the demonstration a capital tea was served at the college, and excellent photographs of the group were taken by Mr. Ronault, the well-known Cannington photographer.

The party then assembled for a meeting in the Lecture Hall. The President (Mr. T. W. Cowan, F.L.S., F.R.M.S.) was supported among others by the Mayor of Bridgwater (Alderman S. Berry), the Chairman of the Association (Mr. L. E. Snelgrove, M.A., M.Sc.), the general Hon. Secretary (Commander Graham, R.N.), and the Divisional Secretary (Mr. William West).

Mr. Snelgrove pointed out that in its President the Association had the greatest bee-keeper, not only in this country, but probably in the world, and invited visiting friends interested in bee-keeping to join the Association.

The President, who received a great ovation on rising, explained that the most important item in the programme was the presentation to be made to Mr Bigg-Wither, late General Hon. Secretary and Treasurer of the Association. Mr. Bigg-Wither's predecessor (Mr. Snelgrove) took over the secretarial work when the Association was in a very low state, the membership being reduced to 50. Before he resigned he saw the membership increased to 500. Mr. Bigg-Wither was then appointed. The ten years during which he (Mr. Bigg-Wither) had acted as Hon. Secretary was undoubtedly the most difficult time any bee-keeper had experienced. During the whole period he had to contend with the Isle of Wight disease, which decimated bees in this county. When the country was practically depleted of bees, Mr. Bigg-Wither took up the restocking scheme with great success, and carried it through to the satisfaction of all concerned. During the war Mr. Bigg-Wither had other important duties thrust upon him, and he also performed a great amount of expert work on behalf of the Association. The restocking scheme entailed a deal of work, but instead of employing clerical assistance Mr. Bigg-Wither did the Association work himself, even to writing every letter, and this saving enabled the Association to accumulate surplus funds. Through all these terrible times, when the county was almost devoid of bees, Mr. Bigg-Wither never allowed the Association to get below 200 members; at the present time they were reaping the benefits of his hard work. The membership was gradually increasing, and would soon reach pre-war numbers. The county is practically free of the Isle of Wight disease. In all his work and trying duties, Mr. Bigg-Wither was ever courteous and willing to assist anyone in bee-keeping. He was always ably supported by his wife, who, with Mr. Bigg-Wither was a certificated expert of the British Bee-keepers' Association, and he was sorry she was not there that day, when the Association would show its appreciation of her husband's valued work. He would ask the Mayor of Bridgwater, who had kindly honoured them with his presence, to make the presentation. (Prolonged applause.)

The Mayor, who had a hearty reception, expressed his pleasure at being present. He expressed a hope that Mr. Bigg-Wither would live many years, and when he heard the clock strike he would be reminded of the Association's kind regards for him. Amid great applause, the Mayor handed Mr. Bigg-Wither a very handsome 8-day mahogany and gold drawing-room clock, inscribed on a gold plate as follows:—"Presented to L. Bigg-Wither, Esq., by members of the Somerset Bee-Keepers' Association, in recognition of his services as general Hon. Secretary for ten years. August 19, 1922."

Mr. Bigg-Wither, who was very cordially received on rising to acknowledge the presentation, expressed his deep appreciation of all that had been said, and assured them that the work of the Association had been a continuation of his hobby, which had extended over 20 years, and the handsome gift which they had given him would serve as a reminder of his happy time as their Secretary. The Somerset Bee-Keepers' Association was unique in having for its President such a gentleman as Mr. Cowan, while in its Chairman they had one of the foremost scientific men in matters of research work. Somerset was one of the finest counties in England for bee-keepers, and, with such officials as they had now, the Association should make splendid progress. He hoped all bee-keepers would join the Association, and support their present worthy and energetic Secretary. (Applause.)

Interesting discussions followed in regard to diseases in bees and the treatment of same, and to show the increase of English honey production since the Isle of Wight disease had been checked the President mentioned that imported honey had decreased from £892,888 in 1919 to £224,201 in 1920, and to £81,909 in 1921.

Votes of thanks were accorded to the Mayor, to the Matron and voluntary helpers who had provided such an excellent tea, and to Messrs. Mackie and Turner for the splendid arrangements they had made for the gathering. Afterwards the party again visited the apiary, where the successful results of the afternoon's demonstration were seen, and they also inspected the Institute grounds. (*Communicated.*)

New Forest Agricultural Show.

HONEY SECTION.

The above show at Bartley Cross on Wednesday, August 23, attracted a large number of entries, and some exceptionally good honey was exhibited. The arrangement of the exhibits was made by Mr. B. H. Dalrymple and a staff of workers, and much praise is due to them for the work they did. The honey tent was well filled all through the day, and many bee-keepers were advised on various questions, whilst bee-keepers from the neighbourhood had an opportunity of meeting some of the writers in the BRITISH BEE JOURNAL, amongst them being our friend from Violet Farm, who had a large exhibit of comb and extracted honey in the trophy class; he, however, was beaten into

second place by an exceptionally fine trophy from Mr. E. C. R. White.

The light class honey proved a very close competition, and the judges had a difficult task before them. All the exhibits in the show provided keen competition, and Messrs. H. P. Young and H. Bright made the following awards :—

OPEN CLASSES.

Class 58.—Best Complete Hive. 1, Messrs. Taylor, Ltd.; 2, Messrs. Burti.

Class 59.—Best Complete Beginner's Outfit. 1, Mr. J. E. Pinder; 2, Messrs. Taylor.

Class 60.—Best display of Honey and Bee Products.—1, Mr. E. C. R. White; 2, Mr. J. J. Kettle; 3, Mr. A. J. Hickman.

Class 61.—Best six Bottles of Granulated Honey of any year. 1, Mr. C. Robinson; 2, Mr. F. D. Hills; 3 Mr. H. H. Hall.

Class 62.—Shallow Frame of Honey.—1, Mr. E. C. R. White; 2, Mr. A. Chappell; h.c., Rev. Canon Farrar.

Class 63.—Twelve 1-lb. Bottles Extracted (Light).—1, Mr. C. Robinson; 2, Mr. G. Dear; 3, Mr. Alfred Chappell.

Class 64.—Twelve 1-lb. Bottles Extracted (Dark).—1, Mr. J. Grinter; 2, Mr. E. C. R. White; 3, Mr. J. J. Kettle.

Class 65.—Twelve Sections, not Heather.—1, Mr J. E. Pinder; 2, Mr. J. Grinter; 3, Mr. C. Robinson.

Class 66.—Twelve Sections, Heather.—1, Mr. J. J. Kettle.

CLASSES FOR EXHIBITORS WITHIN 15 MILES.

Class 67.—six 1-lb. Bottles Extracted Honey (Light).—1, Mrs. Hines; 2, Mr. Hall; 3, Mr. G. H. Mouland.

Class 68.—Six 1-lb. Bottles Extracted Honey (Medium).—1, Mr. Britton; 2, Mrs. Hines; 3, Mr. Mouland.

Class 69.—Six 1-lb Bottles Extracted Honey (Dark).—1, Mr. Hickman, 2, Mr. Hayes Turner; 3, Col. Kettlewell.

Class 70.—Six Sections (Not Heather).—1, Rev. Canon Farrar; 2, Col. Kettlewell; 3, Capt. Trinder.

Class 71.—Six Sections (Heather).—1, Lt.-Col. Kettleweli.

Class 72.—Best Collection of Beeswax.—1, Mr. B. H. Dalrymple; 3, Mr. J. J. Kettle.

Class 73.—Smallholders' prize, best three Sections.—2, Mrs. Martin.—*(Communicated.)*

Carmarthenshire Bee-keepers' Association.

Unqualified success attended the second annual exhibition of the Carmarthen and District Allotment and Horticultural Society, held at the St. David's Memorial Hall, Carmarthen, on Saturday, August 19.

In connection with the show was also held the annual exhibition of the Carmarthenshire Bee-keepers' Association. The display of honey, considering the bad season, was a very good one, and the judge (Mr. J. Herrod-Hempsall), who gave entire satisfaction, spoke in high terms of the quality of the bee produce placed before him.

During the day a demonstration in bee-keeping was given by Mr. D. Davies (Cert. Expert), The Crossing, Abergwili.

The secretarial work was ably carried out by Mr. H. Tew, 21, Priory Street, Carmarthen.

The prize list was as follows :—

HONEY (OPEN).

Three 1-lb. Sections of Comb Honey. 1, Geo. Evans, Bromstead, Newport, Salop; 2, D. J. Griffiths, Reservoir, Llanelly; 3, H. Aubrey, Felinfoel, Llanelly.

Three 1-lb. Jars of Light Honey.—1, Geo. Evans, Bromstead; 2, D. J. Griffiths; 3, H. Aubrey.

Three 1-lb. Jars Honey, other than light. 1, Harry Tew, 21, Priory Street, Carmarthen; 2, H. Aubrey; 3, J. R. Jones, Closglas, Henllan.

Three 1-lb. Jars Granulated Honey (any year).—1, Geo. Evans; 2, D. J. Griffiths; 3, H. Aubrey.

Best Exhibit of Beeswax. 1, J. R. Jones, Closglas; 2, G. Evans; 3, D. Bateman, Eglwyswrw.

Display of Bee Produce. 1, D. J. Griffiths, Reservoir, Llanelly.

Exhibit of Practical or Scientific Nature. 1, W. P. Meadows, Syston, near Lancaster; 2, A. Fry, Glenrosa, Barnsole Road, Gillingham, Kent.

MEMBERS' CLASSES.

Three 1-lb. Sections of Comb Honey.—1, H. Aubrey; 2, D. J. Griffiths.

Three 1-lb. Jars of Light Honey. 1 H. Aubrey; 2, J. Enoch, Pencader.

Three 1-lb. Jars of Honey, other than light. 1, H. Tew; 2, H. Aubrey; 3, D. J. Griffiths.

Three 1-lb. Jars Granulated Honey. 1, H. Aubrey; 2, D. J. Griffiths; 3, H. Tew.

Frame Honey. 1, H. Tew; 2, H. Aubrey; 3, D. J. Griffiths.

Beeswax. 2, D. J. Griffiths.

Gift Class.—1 lb. Jars of Honey (Light or Dark).—1, H. Tew; 2, D. J. Griffiths; 3, H. Aubrey.

The Apis Club Silver Medal for most points in Show.—D. J. Griffiths, Reservoir, Llanelly.

The B.B.K.A. Silver Medal for second highest number of points.—H. Aubrey, Felinfoel, Llanelly.

The B.B.K.A. Bronze Medal for third highest number of points in Show.—H. Tew, 21, Priory Street, Carmarthen.—*(Communicated.)*

Honey Show at Cannock.

The Cannock and District Horticultural and Agricultural Society held their 24th annual show on August 19 and 21.

The honey department was described by the judges—the Rev. W. H. Richardson and Mr. J. Price—as the premier show in the Midlands both for quality and entries. With a fine week-end and an attendance of over 21,000, success is assured.

The prize-winners were :—

OPEN CLASSES.

Class 129.—Four 1-lb. Sections (12 entries).—1, Geo. Evans, Brimstead, Salop; 2, J. B. Leighton, Stafford; 3, G. Gripton, Newport, Salop; 4, H. A. Edwards.

Class 130.—Four 1-lb. Jars Light Honey (19 entries).—1, E. Hodgson, Huntingdon, Hunts; 2, M. Partridge, Cannock; 3, J. Burkitt, Rainhill, Lancs; 4, J. B. Leighton; 5, J. H. Oldfield, Rotherham.

Class 131.—Four 1-lb. Jars of Medium Honey (16 entries).—1, J. B. Leighton; 2, A. Berresford, Heath Hayes, Staffs; 3, A. E. Warren, Bletchley; 4, W. C. Walsh, Liverpool.

Class 132.—Four 1-lb. Jars of Dark Honey.—1, E. Jacques, Lichfield; 2, M. P. Berresford, Uttoxeter, Staffs; 3, J. B. Leighton.

Class 133.—Four 1-lb. Jars of Granulated Honey (16 entries).—1, J. B. Leighton; 2, G. Evans; 3, M. P. Berresford; 4, G. Griffiths.

Class 134.—Cake of Beeswax, not under ½ lb. (14 entries).—1, J. B. Leighton; 2, H. A. Edwards; 3, A. Berresford; 4, P. Berresford.

Class 135.—Comb of Honey suitable for extracting (9 entries).—1, J. B. Leighton; 2, G. Gripton; 3, G. Evans; 4, L. George, Wolverhampton.

Class 136.—Best Honey Cake (10 entries).—1, M. Partridge; 2, J. B. Leighton; 3, J. Wheeler, Cannock; 4, A. Berresford.

Class 137.—One Jar, Gift Class (15 entries).—1, J. B. Leighton; 2, H. Oldfield, Laughton, Rotherham; 3, G. Evans; 4, M. Partridge.

LOCAL CLASSES.

Class 138.—Four 1-lb. Sections.—H. Bryan, Cannock.

Class 139.—Four 1-lb. Light Honey.—1, M. Partridge; 2, A. Pegg, Cannock; 3, A. Berresford.

Class 140.—Four 1-lb. Dark Honey.—1, A. Berresford; 2, M. Partridge.

Class 141.—Three 1-lb. Granulated Honey.—1, A. Berresford; 2, H. Bryan; 3, M. Partridge.

Class 143.—Cake of Beeswax.—1, A. Berresford; 2, M. Partridge.

Class 144.—Four 1-lb. Jars of Honey, for cus-

tomers of Messrs. D. W. Clarke & Sons, Ltd.—1, M. Partrige; 2, M. Meanley, Norton.

Class 145.—Cannock and District Bee-keepers' Association.—1, A. Berresford; 2, M. Meanley; 3, M. Partrige.

Staffs Bee-keepers' Association.—Silver medal, J. R. Leighton; bronze medal, M. Partrige.—(*Communicated.*)

Middlesex Bee-keepers' Association

A very interesting lecture on wintering bees was given in the grounds of Woodhouse, Woodhouse Lane, Finchley, on Saturday, August 26. Mr. J. Herrod-Hempsall, the lecturer, kept his audience keenly interested for nearly an hour, afterwards answering numerous questions.

It is a pity that bee-keepers living in the immediate neighbourhood did not take more interest in the lecture, the majority of the audience coming from a distance, Enfield, Harlesden and Highgate all sending listeners.

Members of Associations should remember that attending such functions aids the work of the Association, and that no matter how much we know, we can always learn.

BRENTFORD HONEY SHOW.

I would call the attention of intending exhibitors at this show on September 9 to an alteration in the prize list. Through the kindness of Mr. R. Lee, of Uxbridge, the exhibitor securing the second highest number of points will be entitled to appliances to the value of 10s. 6d.—G. JAMES FLASHMAN, Hon. Secretary.

Feeders.

[10682] It may prove of interest to your readers to give the following facts re feeders.

With reference to syrup tins, and making the holes in top lid or bottom, viz., Rev. Hemming's idea, I have tested the matter thus: In the bottom of a 2-lb. can I made four fine holes in a circle of about 1 in. and a fifth hole in the centre. Filling as rapidly as possibly, and replacing the lid I found that the "deluge" amounted to three dessertspoonsful of summer-feed syrup. The holes were made so that the burr was in the inside. This leakage is not serious, and I agree with Rev. Hemming it may be ignored. The plan would not, however, work so satisfactorily for rapid feeding with many holes.

A more important point before using such can feeders is to reverse the direction of convexity of the dished bottom. This can be done by pressure, springing it inwards. Then there is a bee-space formed over the frame top bars.

Regarding the much-catalogued so-called regulating feeders graduated from 0 to 9 holes, I have tested one of these on several occasions, and find that it is emptied almost as quickly when the index is at 0 as when it is at 9. A brief reflection reveals the defect. The cap of the bottle is flat, and in contact with the metal plate of the stage. When the holes are turned off the juxtaposition of the two surfaces induces capillary action, and a film of syrup spreads between the two surfaces, and the bees can get it through the semi-circular slot. Either there should be a gap between the two plates and the shoulder of the bottle should rest on the feeding stage, or, better, there should be a circular groove spun in the cap or metal plate, and the holes should be at the base of, or opposite to, the groove. The bees' tongues would be long enough to bridge the gap or groove.

JAMES B. BALLANTYNE.

Bee Shows to Come.

September 9.—Middlesex Bee-keepers' Association, in conjunction with the Brentford Allotments Association Annual Show, at the Wesleyan School Hall, Clifden Road, Brentford. Twelve Open Classes for Honey, Wax, etc.—Schedules and Entry Forms from R. F. Babbage, 33, Whitestile Road, Brentford, Middlesex.

September 13, at Twickenham.—Twickenham Horticultural Society's Vegetable Exhibition. Honey exhibits under the control of Twickenham and Thames Valley B.K.A. Open classes for single jar and section.—Schedules from Miss M. Byatt, "Hawthorn," Hanworth, Middlesex. **Entries close September 8.**

September 14 and 15, in the Cattle Market, Newport.—Newport Allotment Holders' Association Utility Show, in connection with the Mon. B.K.A. Open Classes for Honey.—Hon. Secretary, Mr. J. K. Price, 37, Courtybella Terrace, Newport (Mon.)

September 16.—Moseley and King's Heath Horticultural Society and South Staffordshire Bee-keepers' Association. Five Open Classes for sections, light and medium honey in jars, also beeswax. Several Local Classes.—Schedules from H. C. Weston, 37, Pineapple Road, King's Heath, Birmingham.

September 16 to 22.—British Bee-keepers' Association Annual Show at Grocers' Exhibition, Royal Agricultural Hall, Islington, London.—Schedules from Hon. Secretary, B.B.K.A., 23, Bedford Street, Strand, London, W.C.2. **Entries closed.**

September 21 and 22.—Herts County Bee-keepers' Association, Barnet Branch, in connection with Barnet Allotment Holders' Association's Show. Open Classes for 3 1-lb. Bottle and 3 1-lb. Sections, first prize 20s., second prize 15s., third prize 10s.—Schedules from Norris S. Toms, 60, Fitz-John Avenue, Barnet, Herts.

September 27. — Altrincham Agricultural Society. Largest one-day show. Several Classes for honey, etc., both open and local. Good prizes. Send one jar for Gift Class, to be given to Hospital.—Schedules from H. Turner, 1, Market Place, Altrincham.

September 28, 29, 30.—Kent County and Western Divisional Show at the Crystal Palace. Open Classes to United Kingdom (12 classes), Honey, Wax, Mead, Novelty, Scientific.—Schedules from Hon. Show Secretaries, W. E. Clifford, Southlands Road, or E. R. Seadon, Stanley Road, Bromley, Kent.

October 4 and 5.—The Society of the Four Northern Counties limited to Cumberland, Durham, Northumberland, Westmorland, Congress and Fruit Show, also Bees and 15 Classes for Honey, to be held in the Market Hall, Kendal.—Schedule for Honey Section from G. Chatham, 18, Stramongate, Kendal. **Entries close September 27.**

October 12, at Ongar, in connection with the Ongar and District Agricultural Association.—Extracted and Comb Honey. Open to Essex.—Schedules from G. A. Taylor, Hon. Sec., Ongar and District Bee-keepers' Association, Ashcroft, Ongar.

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One Penny per Word.

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Advertisements must reach us NOT LATER than FIRST POST on MONDAY MORNING for insertion in the "Journal" the same week.

PRIVATE ADVERTISEMENTS.

OVERSTOCKED.—Four Stocks Hybrids, hives, combs. Offers. — FRASER, "Poplars," Palmerston Road, Wealdstone. j.1

LIGHT LEICESTERSHIRE HONEY, £7 10s. per cwt.; 28-lb. tins; tins and carriage free; sample 4d. — ERNEST HULL, North Street, Barrow-on-Soar. j.10

OVERSTOCKED Two strong 10-frame Stocks, Bozalla Queens, late 1922, mating not guaranteed, only pure drones flying, £2 15s., carriage paid. MORRIS, 13, St. John's Road, S.W.18. j.11

REALISATION SALE on account of poor season. One "Imperial" Treadle Saw Bench, cost new last year £23, condition new, takes 10¾ in. between fence and saw; also quantity of Lee's and Dadant's Brood and Super Foundation, Bar Frames, Standard and Shallow Queen Excluders, Porter Escapes, etc.—Offers for whole or part to Box 90, B.B.J. Office, 23, Bedford Street, Strand, W.C.2. j.12

FINEST ENGLISH HONEY, quality guaranteed, in 28-lb. tins, 1s. 3d. per lb.; tins free; f.o.r.—HARVEY, Apiarist, Andover. r.h.76

DISSOLVING PARTNERSHIP.—Sale, Hives, new this year, double walled back and front, painted, single brood box, 25s.; double brood box, 30s.; Bees, 7s. 6d. per comb, with Queen; carriage forward; c.w.o.—LACEY & EARL, Orchard Apiary, Anstey Lane, Leicester. h.118

FEW good fertile Hybrid Queens, 6s. each.—ADKINS, Highmoor, Harpenden. r.h.85

TAYLOR'S WHITE SOFT CANDY.

Manufactured from guaranteed pure White Cane Sugar.

1/- per lb., post extra,
or 4lb. parcel, **5/-** post free ; 7lb., **8/-** post free ; 10lb., **11/-** post free.

Special quotations for large quantities.

TAYLOR'S SYRUP for Autumn feeding.

7lb. tin, **8/9**, post 1/6 ; 14lb. tin, **16/6** carr. ford. ; 28lb. tin, **32/6** carr. ford.

E. H. TAYLOR, Ltd., Beehive Works, WELWYN, HERTS.

FEW ½ lb. Honey Bottles, 25s. per gross.—HOWARTH, Weymouth House, Purrett Road, London, S.E.18. r.j.23

HIVES OF BEES for Sale, complete with season's honey.—Apply, DR. HOLLICK, Knowle, Birmingham. j.2

FOR SALE, two very choice 1922 Italian Queens, 8s. each. Really fine W. Wyandotte Cockerels for Sale, price 18s., 30s. each.—REV. CROWE, Merriott, Crewkerne. j.3

HEALTHY STOCKS.—Two for Sale, 10 frames, in new W.B.C. hives; also 7-frame Stock with Penna Queen; cheap.—NICHOLAS, Markyate, Dunstable. j.4

THAT GRAND STRAWBERRY, Mdme. Kooi, strong, well-rooted runners, 10s. per 100, or exchange Bee Appliances.—J. HOWARD, 8, Cecil Road, Paignton, Devon. j.5

MUST SELL.—Twelve 8-frame Stocks Hybrids, 1922 Queens; reasonable offer whole or part; no disease; buyer send boxes.—WHITE, 10, Northern Parade, Portsmouth. j.6

STRONG STOCKS, 8 frames, young Queens, £3; Skeps, 25s.—12, Devon Road, Fishponds, Bristol. j.8

THE World's Famous Raspberry, Lloyd George, perpetual fruiting, 30s., 50s., 60s., and 70s. per 100.—J. J. KETTLE, The Violet Farm, Corfe Mullen, Wimborne, Dorset. h.78

BEESWAX, pure, 5 cwts., packed in ½-cwt. bags, £8 16s. per cwt., f.o.r. London.—Box 89, B.B.J. Office, 23, Bedford Street, Strand, W.C.2. j.9

A SOUND INVESTMENT.—Three heavy Stocks Carno.-Italian, one on 20 standard frames, two on 10, one supered with skep, two Swarms each on 8 frames; nine Hives, six will super, four S.F. Racks; several spare stock S.F. and Section Racks; 50 clean Combs, S. and S.; about 200 Frames, S. and S.; Cowan's Standard Automatic Extractor, plated fittings; large Ripener; Uncapping Tray, three parts; 44 Screw-top Bottles; 150 1-lb. Sections; about 50 Dividers; six Aluminium Feeders; five Skeps; Travelling Box; Clearer Board; 1 gross M. Ends, wire; Embedder; Smokers; Veils, etc.; stock perfectly healthy; hives and appliances practically new. Every assistance given to pack and remove. Cause of sale, owner going abroad. £12 the lot.—HUNT, Railway Cottages, Laindon, Essex. j.21

OVERSTOCKED. — Strong, healthy 10-frame Stock Hybrids, 50s.—ROWLEY, 17, Milner Road, Thornton Heath. h.151

SELL.—Two small powerful Acetylene Brass Head Lamps, with separate generator, suitable light car or cycle car, £3 the set; Mills' Automatic Acetylene Generating Plant, suitable for 10-roomed house, £6; quantity of Acetylene Gas Brackets and Chandeliers, prices with particulars; all carriage forward. — HERROD-HEMPSALL, Old Bedford Road, Luton, Beds. c.77

WANTED, small Pump for tank in greenhouse. —Price and particulars to W. HERROD-HEMPSALL, Luton, Beds. f.108

For best bees, queens and appliances come to PEARSON & GALE, Marlborough.

SPECIAL OFFERS FOR RE-QUEENING AND ITALIANISING.

PENNA QUEENS. **Address:—E. PENNA, Casella Postale 178, Bologna, Italy.**

From September 1st until countermanded; one queen, 7/-; two queens at a time, 12/-; 4 queens at a time, 18/-. Orders booked in rotation; cash with orders; carriage paid, safe arrival guaranteed. Payment by cheque or British Postal Orders. International money orders are *not* accepted.

APIARY FOR SALE.—Twenty healthy Stocks, 1922 Queens; purchaser to remove; if bought in one lot £5 allowed towards expenses; inquiries and inspection invited.—ASHWORTH, Pound Street, Warminster. r.h.143

BUSINESS ADVERTISEMENTS.
1½d. per word.

THE WISE BEE-KEEPER looks for quality. The South Hampshire Apiaries breed only from the very best strains. Result: Quality and satisfaction. Beginners' Outfits from £5.—All communications, H. E. NEWTON, New Milton, Hants.

IMPORTED ITALIAN QUEENS, Penna or Tortora, 6s.; prompt delivery.—HENSLEY.

MEDICATED SYRUP, autumn feeding (white), cane sugar, 7 lbs., 8s. 6d.; 14, 15s.; 28, 27s.; carriage paid.—HENSLEY.

BOTTLES! BOTTLES!!—Pound screw top, caps and wads, 29s. gross, 3s. dozen.—HENSLEY, Luton Apiary, Chatham. j.13

THROUGH uniting nuclei for wintering, following 1922 Queens for Sale; Imported Dutch Queens, 5s. 6d.; Hybrid Swiss-Italian, 7s.; imported Italian, 8s.; Swiss and Carniolan, 9s.—DAVIDSON, Bee-keeper, Burton-on-Trent. j.14

HYBRID and Black Queens, 1922, vigorous, 3s. each, post paid. — HARVEY, Apiarist, Andover. j.15

EXCELLENT TINS, cheapest sold, handles bolted, lids; 7 lb., 10d.; 14 lb., 1s. 2d.; 28 lb., 1s. 9d.; forward.—BOWEN. j.16

PACKAGE BEES.—Good lots to strengthen weak stocks, with vigorous Queens, 12s. 6d.—BOWEN. j.17

8/- ONLY. — Famous Cotswold Queens, unequalled for quality.—BOWEN. j.18

EXCELLENT BOTTLES, well packed. Keen buyers should write for low carriage paid prices.—BOWEN, Coronation Road, Cheltenham. j.19

FERTILE PENNA QUEENS, 6s. 6d.; Hybrids 6s., per return.—GILBERT STONE, Chelsea Road, Easton, Bristol. h.163

GOLDEN ITALIAN QUEENS.—Few mis-mated, 8s.; limited number of 3-band Queens of special merit, 8s. 6d.—E. COOMBER, 64, Ronald Park, Westcliff-on-Sea. j.7

ENGLISH HONEY wanted, any quantity. State lowest price.—Box 88, B.B.J. Office, 23, Bedford Street, Strand, W.C.2.

IMPORTED Carniolan Queens, 8s., September.—B. WOODLEY, Thorne, near Doncaster. j.20

SURPLUS ITALIAN HYBRIDS. An opportunity to acquire good stock at half value. 8-frame Stocks, 45s.; 5-frame Nuclei, 25s.; Queens, 7s.; boxes 10s., returnable. Driven Bees, Natives, 3s. lb., on wired foundation 1s. frame, stock combs 1s. 8d. each; all carriage paid.—W. ROBERTS, The Thorne Apiaries, Ninfield, Battle, Sussex. j.22

FERTILE ITALIAN QUEENS by return (weather permitting), 7s. 6d.; Hybrids, 5s.—TICKELL.

CANDY.—7 lbs., 7s. 6d.; 10 lbs., 10s. 6d.; post free. — TICKELL, Westbourne Apiary, Cheltenham. h.159

HONEY FOR BEE-FEEDING. — Australian, 60-lb. tin, 35s.; 8 lbs., 7s. West Indian, 56 lbs., 35s. 6d.; 7 lbs., 8s.; a cheaper quality, 60 lbs., 30s.; carriage paid; reduction quantities; samples on application.—LONDON TRADING AGENCY, 32, St. Mary Axe, London, E.C.3. r.h.115

STRICTLY BUSINESS.—6 lbs. Flavine—S B. Candy, 7s.; 10 lbs. Flavine Honey Sugar, 10s.; 10 lbs. Autumn Sugar Syrup, 8s.; all carriage paid to any address in Great Britain.—S. H. SMITH, 30, Maid's Causeway, Cambridge. h.23

HONEY, in 60-lb. tins; 30s., f.o.r.; sample, 6d.—COBB. r.h.169.

CANDY, 4 lbs., 4s. 6d.; 10 lbs., 9s. 9d.; larger orders, 9d. per lb., f.o.r.—COBB, 33, Bevan Road, Plumstead. r.h.169

SPECIAL OFFER.—1922 Queens; Hybrids, 6s. 6d.; Imported Italians, 8s.; Imported Carniolan, 9s.; until sold; safe delivery guaranteed.—C. T. OVERTON & SONS, Crawley, Sussex. h.170

HEALTHY DRIVEN BEES.—Natural Swarms, this season, with fertile Queen, 10s. 6d. per lot, carriage paid; cash with order.—PULLEN, Ramsbury, Hungerford. r.h.101

TO ALL SECRETARIES and BEE-KEEPERS.—Send to me for samples of Honey for autumn feeding.—F. GOODRICH, 10, Weston Park, Crouch End, London. h.106

JACK TICKELL.—For Queens, Stocks and Nuclei. List free. — Westbourne Apiary, Cheltenham. r.a.54

7/- ITALIAN QUEENS, beauties, giving magnificent colonies heavy storing bees.—ATKINSON, Fakenham. r.h.42

"SPLENDID! No swarms from your queens so far," writes Kent client, July 26. 7s. pure Italians.—ATKINSON, Fakenham. r.h.43

BRIG.-GEN. L., June 23: "Queen arrived safely. Looks first class, and very good value for money." August Queens specially fine, secure yours early, 7s. each, pure Italians.—ATKINSON, Fakenham. r.h.44

AMPLE SUPPLIES of my fine Italian Fertiles, one, dozen, or hundred; quick delivery; satisfaction perfect.—ATKINSON, Fakenham. r.h.46

CHOICEST ITALIAN QUEENS BRED; great workers. "Your queens have done the best of all I have this year," writes N. The Queens up again with my fine Queens, 7s. each.—ATKINSON, Fakenham. r.h.45

1922 RE-QUEENING.—Book early. Sooner done earlier I can arrange to cover all requirements beyond a considerable estimate already fixed These Italians make good.—ATKINSON, Fakenham. r.h.48

ITALIAN QUEENS by RETURN OF POST. Tested, 9s. 6d.; Untested, 7s. 6d.—PEARSON & GALE, Marlborough.

The Bee-Keepers' Calendar.

SEPTEMBER, 1922

14 Thursday. "Nor yet shall bees incase their jealous stings,
However he may watch their straw-built huts."
T. Hood, "Midsummer Fairies."

15 Friday. "O, star afar, that dimly shines!
O honey star of wandering bees!
Look down this road and light the way
O'er clover isles and clover seas,
That brownie bee and brownie brother,
With pollen baskets sweet with musk,
All red and black and gold a-smother,
May find the wee house in the dusk."
E. S. Fleming (B.B.J., 18 VII., '18).

16 Saturday. "And great bees come, with their sleepy tune,
To sip their honey and circle round."
P. B. Marston, "Summer Changes."

17 Sunday. "Without the thorn no rose;
Without the sting no honey."—*Proverb.*

18 Monday. "On the hot work runs
And fragrant combs are redolent of thyme."
Virgil, Georgics, Book IV.

19 Tuesday. Feed with thick syrup until the bees will take no more.

20 Wednesday. "Late August or early September, the stunning cicala is shrill,
And the bees keep their tiresome whine round the resinous firs on the hill."—*Browning, "Men and Women."*

The Need for Legislation for Bee Diseases.

We have a number of times warned our readers of the danger of disease being spread over a wide area by the uncontrolled moving of stocks to and from the moors for the heather harvest. The last time was in the BRITISH BEE JOURNAL for August 3, in a footnote to a report from the Newcastle and District Association, whose members intended taking a number of stocks to the moors. Unfortunately, in one case at least, that warning was not heeded, with disastrous results. As a result, so far as we can gather, all the stocks taken, over 30, and also those belonging to Mr. Dent, who provided space for the hives to stand, are affected with Acarine disease, a very poor return to Mr. Dent for his kindness. No better object lesson as to the need for legislation to deal with bee diseases could be given than this case mentioned by Mr. J. Watson-Egglestone on another page. Had such legislation been in force, the moving of infected colonies could have been prevented. But this is not by any means the end of the tale. If those diseased colonies have not already been taken home again, it is intended to do so—*and there is no power to prevent it being done.* What the ultimate result will be no one knows. From such a beginning it is quite possible for another epidemic involving the

whole country to start. Those who imagine that it is only necessary to warn bee-keepers of the fact that disease is present in one or more of their stocks for precautions to be taken to prevent it spreading would do well to consider the hard facts presented by Mr. Watson-Egglestone, and we know that they are not exaggerated, but rather the reverse. It was quite evident to the owners of these stocks that they had become badly infected by disease, in addition to that they were warned of the bees' condition, and we believe some of the hives were taken home the next day! What a triumph for educational and persuasive methods? What a difference if, instead of only being able to say, "You should not do so," someone had authority to say, "You *shall not* do so," and see that it is not done.

In addition to the stand at Burnhill, the same conditions prevail at the one at Salters Gate. And these hives also will probably be distributed over a wide area, and who can say how many other similar cases there are over the wide stretches of moorland?

EXAMINATION OF BEES.

Col. Samman, Kirriemuir Apiary, Stillorgan Park, Co. Dublin, who so kindly offered to examine bees free of charge on condition that a stamped addressed envelope was sent ("B.B.J.," August 10, page 410), writes us that he overlooked the fact that English stamps are not accepted as prepayment on letters from Ireland, so a little different arrangement must be made. Will anyone sending bees please send a postal order for 6d., which will entitle them to free replies on three different samples.

A Dorset Yarn.

"To scatter plenty on a smiling land."

The more one follows up the great good that bees do on a "smiling land," the more one is enthralled by the tremendous amount of energy and action that they will put into the day's work. They have been out on the rasps as late as 7 p.m. on Thursday and Friday in the past week, seem eager "to scatter plenty on a smiling land." There are many lines close together, and all one mass of flowers; even on the cold day of Saturday, as Mr. Lewis, a bee-keeper from Barry, South Wales, came to see me, they were swaying with the north wind on the numerous flowers; as fast as one went others followed on to "The breezy call of incense-breathing morn." Having these flowers close to the hives, on cold days it is a great asset to our lot. Bees do not go far from home when the north winds blow; they were in crowds on the single asters (*Sinensis*); these are 3 ft. high, and were sown in the open ground in early April. They flower very freely and will last a long time. Last year we sold £30 worth of flowers, this year as yet they have not paid us a lot, but then fruit has been a very heavy crop. Close to the bees are plenty of ripe plums, but have not yet seen a bee on them; ripe gages, very rich and juicy, do not tempt them from the flowers. As our visitors taste the gages and rasps one cannot help but state it is the bees that "scatter plenty on a smiling land." All the Dorset yarner did was plant the trees and till the soil; tillage made the trees grow freely, time added the fruit buds, the bursting flower buds brought the bees to perfect the pollenation, then the sun and showers have "scatter'd plenty on a smiling land." Then when they come into the great barn and see the pails of extracted honey not yet bottled up, the weight of each pail nearly a half cwt., racks of 2 lb. sections with large boxes of standard combs not yet extracted, the visitors can see it is bees that "scatter plenty on a smiling land."

Some of the bee-keeper visitors ask "how is it done." They have only kept them a few years; they get a few sections and a rack of standard combs. Some have to feed their bees. This proves them to be bee lovers and good bee-keepers. Have asked them if they read about production of honey in books. Many only read the *Journal*. They get the "seasonable hints." Still, some get great results in a short time. Mr. Garrett, of Broadstone, told me on Thursday he had sold a small swarm for 15s. in late June and had that day extracted a box of shallows (all full) from it; there was over 20 lb. of honey for the short season, but how to get hives up to full strength when the flood of honey is to be harvested can only be by hard, practical experience and following the system that is most productive. Mr. Smith's "week-end bee-keeping" has been very helpful this last summer; it has been a continuation of week-end dealings with bees. He is also helping "to scatter plenty on a smiling land." To-day the land is all smiles, for wild flora is very plentiful; some of the fields of roots have enormous quantities of charlock, in others the yellow chrysanthemum, others have sweet thistles in plenty. The farmer who stints his labour at hoeing time among his roots gets light crops himself, but the man who keeps bees reaps the harvest of his neglect. A 30-acre field next to me is farmed by young ex-soldiers; there are no weeds to be seen in the whole, but in the late farmer's tenancy there was charlock as high as the fences; he had them hoed by men at a price per acre, but these young ex-soldier farmers put in 16 hours a day on the farms. Then milk has to be sent off at six in the morning, then cleaning the weeds from the roots follows on till dark. They keep bees and get a lot of honey, but

it is not from charlock in their own fields, but from the neighbours. Walk across some fields now and make a note of all the wild flora. You would have a fair number of species and varieties, many of them good for bees; bees are to be seen on the large single violet, but not nearly so much as on the Limnanthes Douglassi which is blooming on the young plants, that sowed themselves after flowering in early summer.

But to "scatter plenty o'er a smiling land" with bees is what is first and foremost with us bee-keepers. We keep bees for honey. The most I have this year has been from three boxes of brood combs all placed on top of the brood chamber, the queen working in the two lowest, but not in the two upper ones. Some of them had the first box put beneath, the others on the top; those that did not swarm at all were the ones that did the most, yet some of the swarms did good work. In one that was placed below the brood nest they have drawn out each comb without a drone cell but where the box of combs was above the brood nest; there were many male and queen cells; the queen cells were nearly all attached to the base. This seems to be the best method of raising population; they hesitate about starting honey in sections early, but will begin storing honey early in standard combs if some of them are drawn out, leaving all the lower space to tempt the queen up. The same results come by placing the fresh box beneath the brood nest; this builds up the strength of the hive in May and retards the "swarming fever." Bees, I assume, want to "scatter plenty on a smiling land" by sending out plenty of swarms; that is *their* idea of plenty, but *we* want honey, we discourage the increase, we get the weight of fruit in their season of flowers from the stocks before the swarming season. The pollination of most of them takes place early. That is so with apples and pears, plums and cherries, the summer rasps and strawberries.

All bee-keepers can take to themselves some of the credit of these wonderful crops of fruit, as their bees in their peregrination for food have pollinised the flowers of all around them, so they are helping to "scatter plenty o'er a smiling land." Even those who exhibit great masses of honey, showing the people what bees will do in one season, especially as was shown at Bartley Cross by Col. Kettlewell as the produce of a few hives. This proves that it is not only keeping bees, but it is making bees help to keep you; that is a great difference, but the heavy weight of these exhibits must make the visitors see that there is money in bees. At some of the farmers' shows some of the stock will weigh nearly a ton, but it has taken many months to do it; but a ton of honey can be harvested in a few weeks in summer without renting acres of land to do it or buying oilcake at £15 per ton to feed, as it is with stock. I venture to state that all bee-keepers help to "scatter plenty o'er a smiling land."

J. J. KETTLE.

Jottings from Huntingdonshire

The warmer weather has been a godsend to the bees. They are storing; but the cold nights are against them. The lowering night temperatures are not only trying to the bees within the hives when there is much brood to cover; the flowers also suffer, and so much that it's well on towards mid-day before nectar can be extracted from the blooms. The acres of mustard now in bloom perfumes the air, and small wonder that the bees head straightway to the fields of yellow.

I have been busy answering inquiries which have come by every post regarding bees. The trouble in most cases being the foodless condition of the hives. If it's any encouragement to fellow-bee-keepers, let me say that most of my colonies are so light in honey that I can unaided lift hive after hive from the ground without assistance. One stock of mine, which is in an out-apiary, was last year so heavy that two of us could not lift it into a cart; this year, after deducting the weight of hive and fittings, it weighs only 14½ lb.! Such are the conditions in this part of the county, however, that if this weather continues for a fortnight this particular stock will be well supplied for the winter. Storing at the rate of 2 lb. a day, one can easily calculate the result in 20 days' time. Alas! our climate is so changeable that I must perforce feed. Incidentally let me say that I am using more golden syrup and custard tins than anything else over the feed hole. Feeders are the thing, but when there are stocks to feed by the score one winces at the expense. Outdoor feeding has revealed the presence of numerous native black bees in the neighbourhood, but from whence they come I know not. I have been trying to get a native stock for the sake of the queen, which I have agreed to send into Hampshire for experimental purposes, but, although I have asked the woodmen to let me know of any bees they come across in trees, no news of any such stock has yet reached me.

I had an amusing experience three days ago. Two children came and nearly knocked the back door down and announced they wanted me at once. I visualised an accident to a villager, or a parishioner suddenly taken ill, but when I got to the juveniles they breathlessly broke forth: "Please, sir, come at once. There's a swarm of bees round our back door. Some have come in the house and we're afraid to move." "A swarm?" I asked. "Yes, sir; they've settled in a pan." I went at once, and thought to find a stock of natives at last, driven through hunger to swarm forth in search of a "better 'ole." There was the pan, and, true, it was crowded with bees, as also was a saucepan by its side, but no swarm. The good woman of the house had been making two things, elderberry wine and plum jam, and had put the preserving saucepan and the wine pan outside, "to keep the wasps quiet while she tied down the jam." A passing bee doubtless noted the presence of easily gotten

sweets, informed her sisters, and the rest can be readily imagined.

With regard to outdoor feeding, I find it succeeds on those days when nectar is scarce, but when the weather is such that flowers offer their sweets to the bees, outdoor feeding had better be suspended. So far as wasps are concerned, they are cowards; if you see a dozen bees there may be a score of wasps taking up the syrup, but let there be a hundred bees, the wasps will clear off or be content to get a few sucks near the end of the feeding tin. The presence of plums, moreover, in large quantities offers the wasps all and more than they need, so there is not much to be feared from wasps so far as the hive is concerned. Robbing is not a troublesome feature either. True, there is little to rob, but demoralised bees will go for any hive from which emanates the smell of honey. A late swarm of bees which was domiciled in a skep five weeks ago decided yesterday to come out. I watched it. Very quietly the bees flew about, making absolutely no "hum," proof that they can prevent this sound if they wish. They selected three hives, and I noticed the three containing the most honey, and divided themselves, mingled with the flying bees, and decided to enter. Two lots were admitted, the third seemed doubtful as to their welcome and settled on the weather board and tried crawling down to the entrance. This not being successful, a mass attack was made and an entrance forced. The next day a heap of dead bees in front of the hive told its own tale. The whole thing was an education to me.

E. F. Hemming.

Steeple Gedding.

Week-End Bee-Keeping

By S. H. Smith, Cambridge.

(*Continued from page* 436.)

Holding the torpid queen bee in the palm of one hand and mopping beads of perspiration off his brow with the other, "D. B." looked so unhappy and concerned that I hastened to reassure him.

"You must not let any too tender-hearted emotions overcome you. "D. B.," when handling bees. Many bee-keepers are prone to credit their pets with human attributes and psychic faculties altogether alien to them. Although the co-operative communities of the social insects ante-date our forms of civilisation by eons, their ways are not ours by any means. The anthropocentric notions of the old biologists and of the anecdote retailers and nature fakirs are as dead as mutton.

"Many insect customs are so atrocious and so infernally revolting that they appear more fitted to some Hun or Bolshevik world than to our planet. If insects or their communistic human types ever obtained the mastery on earth there would be no living with them for us. And the ways and morals of the honey bee are in many respects worse than those of the ants, wasps or termites, though poets and philosophers have rhapsodised about them for centuries."

"D. B." had recovered himself and was grinning. "I know so little about the customs and morals of your little friends, 'Week-End,' that I was not worrying about them. What bothered me was the thought that I should be called upon to—er—credit you with the cost of a new queen bee."

"You are pleased to be facetious," "D. B." "Accidents in this apiary are not classed as commercial liabilities. Kindly let me have the cataleptic queen. It is now easy to clip her wings. We trim them and put her on top of skep B, where we can watch her while we finish the driving. We must hurry up, or the bees will become uneasy.

"There! We've got most of them where we want them, and I can't say there are any too many. It would take two of those little Fen skeps to stock a ten-frame hive. We unfasten the driving irons, put the skep with the driven bees on the ground, drop the still rigid queen in among them, and cover the skep with the duster.

"Our little frame is laid flat on a newspaper on the hiving board, and three pieces of string go under it at equal distances apart. The strings are cut long enough to allow of tying them around the frame when the piece of comb is put in it.

"Now for our slice of comb. With the thumb we mark off the depth of the little frame on the right-angled cutting iron. We slip the tool between the centre combs of the driven skep. A half turn, then a run along through the honey cells, about the length of the little frame, and we leave the tool *in situ*. Then with the wide edge cutter we go straight down through the comb at each end to the horizontal cut below.

"The right-angled cutter helps us to lift out the soft piece of cut comb; we press it into the little frame, trim the edges, and tie the strings. The bees will attend to the cleaning up. We push the two nails in the top bar through the roof of the empty skep and clinch them. The hiving board is put into position, the sheet spread, and all is ready.

"As your mind wandered a bit a little while back, D. B., perhaps you will be good enough to recapitulate just what we are supposed to be doing?

"'We drive A and put the driven bees on A's stand. We move B to C and put A on B's floorboard.'

"Correct. Short and to the point. C can go anywhere you like, next to A or B, or to another part of the apiary.

"Ready? We gently dump the driven bees on the sheet and let them run into their new home furnished with the little comb. Watch out for the queen. There she goes! And showing as good a leg as any of her daughters. No, she was not pretending. The cataleptic state is a nervous phenomenon characterised by a muscular tetanus and a lessening of reflexes, and it is not peculiar to insects. Pressure on certain spots will cause rigidity in most articulates. On the

other hand, you may mobilise an insect when in the cataleptic state by touching or tickling excitable regions. If that queen had not come to I would have shown you how it is done.

"We now detach B and place it on the C stand. If you want to examine it take the smoker and the hive tool and do it all by yourself. Yes, cut out all queen cells, please.

"Now tip C gently right side up on to its stand. Here come the home guards, boiling all over the front. Let us retire to the shade for a rest and a smoke and allow the bees to compose themselves.

"No, I am sorry, but I can't show you a swarm in this apiary. All such doings are taboo. Why not hike out to the Fens some fine morning? You could revel in such sights if you chose a warm day.

"No, thanks. Why should I want to sell you those skeps? I could hardly ask more now than the £4 they cost me, plus the price of the extra skep. In a few weeks I can get £6 for the lot, and maybe take off some honey before then.

"I never knew such a fellow for questions. Can't you let me rest a bit and enjoy my pipe? No! I never heard of any of my ancestors 'throwing a fit,' as you so elegantly express it. No! I am not subject to such antics. Why?

D. B. slapped me on the back, gave a shout, jumped up and ran down the path. A characteristic hum filled the air. I turned around to see bees pouring in thousands out of a hive in the single brood chamber row. No. 7 was swarming!

(To be continued.)

Section Honey Production.
Its Drawbacks and Difficulties for Beginners.

Having recently returned from a tour of our Suffolk bee-keepers, I feel some notes may be of interest. In general, the county is very favourable for bee-keeping, and good crops of honey possible. There was a general complaint of very many swarms and little honey, and the question was asked me several times why bee-keepers of old, without our modern knowledge or equipment, were able to secure good crops of honey, whereas so many report failure to-day. Before starting out I was inclined to answer this question that it was owing to the prevalence of disease, and to the fact that with our modern transport and the sending of bees by rail and road in all directions this liability was increased. I have, however, had to revise my theory, having found the bees remarkably healthy, with only one case of American foul brood and two suspicious cases of acarine disease among the hives inspected. Without hesitation I ascribe the root of our trouble to the following: The queens in the vast majority of cases confined to ten English standard combs, with probably one-third at least of these filled with pollen and honey, and on top of these a rack of sections with or without a queen-excluder; a more fatal combination and one more conducive to excessive swarming it is hard to imagine. For my part, I consider the widespread use of comb honey sections the curse of amateur bee-keeping. It requires special skill and attention to get good results, and even under expert management the return per hive is very much less than from extracted honey, and more especially so where drawn-out combs are used. In debating this point with bee-keepers one is met with the argument that an extractor is expensive, and also involves too much trouble to use, especially where only a few hives are kept, and this is reasonable. However, where honey is required largely for family use a better and more profitable way would be to use shallow combs with light foundation over a queen-excluder, and when capped to cut out slabs if desired, or, better still, to take wide-mouthed glass jars and cut out small squares of the comb honey and place carefully in the jars, and afterwards strain the remainder through muslin and fill up the jars, thus giving a combination of comb and strained honey which is quite attractive. With regard to brood chambers, one can only continue to urge either double-brood chambers or the larger frames. The whole matter may appear of minor importance, but it is necessary to recognise that, like poultry-keeping, the industry should be more widespread, and it is from the beginner and amateur that later the professional and expert must develop, and that many are discouraged and give up owing to the poor results and excessive swarming. It is not widely enough known that bees dislike entering the small section boxes, and are only forced to do so when the hive is practically at swarming strength, thus requiring most watchful attention and skill, and it seems a pity that the majority of beginners are started along these lines.

C. HOGAN.

Boxford, Suffolk.

Abstracts from Ayrshire and Other Things.

The season opened very nicely for bees in our northern part this year. Stocks have been found in most instances in very good form, and, so far as I have heard of, no cases of acarine disease, and, to crown it, we have had a delightful spell of honey gathering from fruit and tree blossom.

The season was somewhat late at one point, but all kinds of blossom seem to have burst into magnificent bloom at one time, and the bees for several weeks have been revelling in a width of forage, if equalled, never exceeded at this date, and, with a high temperature, honey is coming in fast. Within the last week or so some swarms have issued; particularly has this been noticeable where hybrids are in evidence. Invariably the native stocks stuck to their work, while Italians or hybrids swarmed, even before they could feel a pinch

for room. In this connection I recognise that what may be the best for one district may not be for another. But for us we ask for nothing better than our old native black bee and an immunity from the foreign invasion.

Marketing Honey.

Recently my attention was drawn to some run honey in jars exposed for sale in the window of a co-operative store by their dirty and unappetising appearance. I am not making things appear any worse than they were when I say it was a downright shame for any bee-keeper to allow jars to leave his hands in the state in which I saw them. I do really think the bottles, to begin with, had not been washed, and the honey put in and all scum or froth which accompany the work of extracting left on, apparently with additions. To use the honey one would need to have strained it first, and even after all one would have "had their doots."

Question: How much harm do such things do the honey trade? I am very doubtful if this will ever meet the eye of the guilty party, for I am more than assured he will not take the "B.B.J." Otherwise the honey appeared to be a fair sample. I tried to find out where it came from, but failed. However, we would like to uphold the old adage that in Scotland, at any rate, cleanliness is still regarded as the "second virtue."

On pages 249 and 250, "B.B.J." of May 25 I have tried to understand the point of view of Mr. Thomas, but I must confess I am entirely puzzled. If he has, as one would infer, found a remedy for acarine disease I think he should find ways and means of putting it on the market, and by all means let him reap the fruit of his discovery. Why not have it put in a form in which it might be registered, and he would thereby profit to the full, and the whole bee-keeping world, so to speak, also? I trust we may hear of this coming soon; it is no good hiding one's light under a bushel.—"AYRSHIRE."

Taking Bees to the Moors.

Being told by our bee friends that we knew nothing about bee-keeping until we had taken our bees to the Moors, naturally our curiosity was aroused, for there seemed some mystery about the affair, for if one mentioned taking bees to the heather to some of the bee-keepers, they shook their heads very knowingly, and oh, dear! what tales they could tell. My husband, after talking to several of the old hands (Mr. Tom Sleight, Mr. Dan Wilson, and Mr. Ashmore), decided that this year some of his bees must go to the Moors. A week before that momentous morning the excitement began, and the night previous to taking them there was no sleep; everything must be in order. We were taking two stocks and a young friend one. Our friend, a young beginner, was also very excited; so as not to oversleep himself he borrowed an alarm clock, and like most alarm clocks it went off long before the time to get up; but those bees must go, so he hied himself off for the motor driver in case that man should forget to come.

My husband went down the garden many times to look at those hives, for when the time came to take them he did not like parting from his friends. They were securely corded, for if one bee got out and stung the driver, well, who can say, perhaps those bees would never have landed. They set off about six in the morning, taking with them jars of syrup in case the weather was bad, for the bees must be fed. I was glad to see my husband safe home again after leaving the bees on the moors, and glad to hear there were no mishaps. They went on August 23, but on the 25th we had to make a journey with our friend to see that no one had run away with the hives. We may not get much heather honey, the weather is too wet, but certainly we shall know a lot more about bee-keeping, for have we not taken our bees to the moors?—(MRS.) L. BENNETT, 42, Walton Road, Chesterfield.

Warwickshire Bee-keepers' Association.

A most successful meeting of the Warwickshire Bee-keepers' Association was held at Burton Green, Kenilworth, on Saturday afternoon, September 2. Coming from all parts of the county, bee-keepers to the number of about 100 first met at Mr. Geo. Franklin's apiary, where a demonstration of uniting two stocks of bees was given, with other manipulations, after which an adjournment was made to the Burton Green Social Club Room, where an excellent tea was provided. Then those present settled down to listen to a lecture by Dr. A. Z. Abushâdy, the editor of the "Bee World," on "Autumn Preparation for the Next Harvest."

The lecturer introduced his subject by remarking that "Autumn Preparation for the Next Harvest" demanded two sets of activities: (1) In the apiary, and (2) in the market. So far as the latter was concerned, he thought it was high time for county associations to look ahead and endeavour to obtain the means for co-operative advertising, if not for co-operative marketing, next season. Official honey labels were excellent things, but not sufficient by themselves. It is true that some bee-keepers are generally fortunate in selling their honey at good prices locally, but this is the exception rather than the rule. There is a distinct need for educating the public regarding the dietetic value of honey, and as to the merits of the home-produced article, and this can chiefly be done through the media of the popular Press by articles and displayed advertising. The official honey label of the Association will then play a more useful part. If bee-keepers will emulate the co-operative example of the honey bee there should be no difficulty by a trivial self-taxation in raising the necessary money for such beneficial advertising.

Regarding the practical work in the apiary, the lecturer divided the requisite work, according to needs and circumstances, into six sections, and in the course of his review he dealt with such important matters as re-

queening, uniting, transferring, feeding, packing, and disease control, all of which were treated as fully as possible within the time available. The interest in the lecture was enhanced by the answers given to the hosts of questions that followed.

At the close a very hearty vote of thanks was accorded to the lecturer, and to Mr. Franklin for the demonstration.

This was the first meeting of its kind organised by the W.B.K.A., and many members expressed the hope that in the future opportunity would be given for similar interesting and instructive gatherings.

Dr. Abushâdy kindly gave a number of copies of the summer number of the "Bee World," which were sold for the benefit of the Association. These were so eagerly snapped up that a further generous supply has been received from him. The Secretary will supply copies to members at 9d. each, post free.—(*Communicated.*)

Middlesex Bee-keepers' Association

The Enfield Branch of the Association arranged, in conjunction with the "Hospital Fête," a very successful honey show on Saturday, September 2. To Mrs. Hodson, of Private Road, Enfield, local Hon. Secretary, great credit is due for the highly interesting display made in the honey section. There were only four classes, all open, and although the prizes offered were nominal, a very fair number of entries were staged. Mrs. Hodson staged a very fine lot of honey, both comb and run. This was for sale, part of the proceeds going to the hospital funds. The stagings were very beautifully decorated with vases of flowers.

Mr. Robert Lee, of Uxbridge, staged a very fine display of bee-keeping appliances, the noticable feature of which was the very high quality of material and good workmanship. Inside the tent an observatory hive formed a never-ending source of interest during the whole afternoon.

Mr. R. Lee kindly acted as judge, and his awards met with universal approval. The following is the list of prize-winners :—

Class 1, two shallow frames.—1, R. R. Babbage, Brentford; 2, J. G. Bale, Golders Green; 3, Mrs. Hodson, Enfield.

Class 2, two sections.—1, J. G. Bale, Golders Green; 2, Mrs. Hodson; 3, Mr. Wilson, Golders Green.

Class 3, two jars medium or light honey.—1, R. R. Babbage; 2, R. B. Dearle, Palmer's Green; 3, J. G. Bale.

Class 4, two jars dark honey.—1, Mrs. Hodson, Enfield; 2, R. R. Babbage, Brentford; 3, Mr. Gibbons, Enfield.

A very interesting feature of the show was the bee tent, in which two demonstrations were given during the afternoon and evening. Very large numbers attended, and very many questions were put as to the why and wherefore of many things. It need only be said that the lecturer in the afternoon was Mr. G. J. Flashman, the Hon. Secretary of the Association, and in the evening Mr. J. Herrod-Hempsall, F.E.S., to explain the deep interest taken in the demonstrations. Enfield bee-keepers are to be congratulated on having such a keen local secretary in charge of their branch of the Association. Mr. Flashman also acted as show superintendent, and the very best thanks of the M.B.K.A. are due to him for his invaluable assistance which added greatly to the success of the show.

(*Communicated.*)

CORRESPONDENCE.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real name and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

Disease on the Moors.

[10683] I hope you will forgive me drawing your attention to an error which appears in the "B.B.J." for August 31, see page 426.

In the report of the doings of the Newcastle and District Bee-keepers' Association, the sub-caption "In affiliation with Durham County Bee-keepers' Association" is not correct. The Newcastle and District Association is *not* affiliated with the Durham County Bee-keepers' Association, nor has it ever been, in fact, they have not even made an application. They have therefore no right to use it, and seeing that Newcastle is not in the Durham county area I have no desire for anyone to think we are anxious to poach members from the Northumberland Association area.

I have perused their report *re* the inspection of hives on the moors, and I am awfully sorry to learn that Acarine disease has again broken out at Burnhill. I only yesterday (September 3) completed a five days' tour of the bee-keepers in the county, having had the special pleasure of accompanying the Technical Adviser to the Ministry of Agriculture and Fisheries, Mr. W. Herrod-Hempsall, F.E.S., and, of course, called at Burnhill *en route*, being accompanied by our treasurer, Mr. E. T. Gardiner. On approaching Mr. J. Dent's enclosure, where over thirty hives belonging to members of the Newcastle and District Association are located, Mr. Herrod-Hempsall exclaimed, "What on earth's the matter here?" I said, "Robbing," and it *was* robbing with a vengeance, and no mistake. It was a case of battle in front of you, battle to the right and left of you, and battle behind you, every stock being engaged in the fray. On getting nearer to the hives, we passed over thousands and thousands of crawlers, the other strains as well as the blacks being very well represented. It is an epidemic of Acarine disease, and no mistake, and the sight we beheld we will never forget. I am certain if some of those persons who are

opposed to legislation had seen it, or better still, had any one of the above-mentioned stocks been dumped in their apiary, they would not be very long in deciding to support us in our plea that some protection is necessary and essential in this county if apiculture is to exist, let alone prosper.

Mr. Dent being the possessor of a microscope, etc., which he very readily brought out for our use, Mr. Herrod-Hempsall soon dissected some bees, found and showed those persons present the mite, *Tarsonemus woodi*, which is causing the bee-keeping fraternity so much worry, trouble, and expense. By-the-bye, had the editorial footnote on page 379, "B.B.J.," been rigidly adhered to, and the stocks carefully inspected by a competent person before going to the moors, this disaster would not have taken place. On reading the report further (see page 426), I note they (the Newcastle members) inspected some more bee stocks after inspecting the above thirty stocks, some of which they admit were affected with Acarine disease. It would be interesting to know what precautions were taken prior to making the Salters Gate inspection, so as not to further spread the disease.—JOHN WATSON EGGLESTONE, Hon. Secretary, Durham County Bee-keepers' Association.

Too Many Queen Cells.

[16634] I am very interested in the article by H. R. Springett, "Hints to Beginners." His idea of moving frames is exactly "it," I find, but I wonder if anyone else has had my trouble this season of constant queen rearing. I began this season with two very strong stocks of Italian bees, headed with young Penna queens. One lot had a super on all the winter, and the other supered on April 9. The last lot swarmed May 27, and I lost them. Next day we discovered them hiving themselves in a hollow tree of a neighbour's, and there they are now. I looked through the old stock and took all the queen cells out, only leaving the best one, which I hoped would come out about June 6 or near by. The other hive I looked through, and could easily see they would swarm, no matter how I altered the combs. So thinking it the only plan, I took the queen and good combs and as many bees as would adhere to the combs, and put in a new hive, with five frames of foundation, and closed the entrance with grass. This completed, I filled up the parent hive with five frames of new foundation, put over a new super of frames of foundation, an extracted super, one half filled, and two section racks. Surely, I thought, nothing could go wrong with my bees now. I had extracted over 30 lbs. of honey from this hive. All seemed quietly working when I left home for a holiday with my father at Rhyl, but, alas! on June 15 I received an urgent letter from home. Bees had swarmed and were taken in a skep. Covered up, and must remain where they were until my return. Of course, that settled it. I must come back that day, as they did not even know which hive had swarmed, etc. I opened on June 16. The old queen working well. The large hive where I had taken her from and put in the five frames and put on the new super had raised 19 queen cells, besides the beauty I had left in. Of course, I removed all the 19. But is not that a record for a queenless stock? I dared not ventilate by raising the front, because if the weather changed, as it did, my sister would not dare to close down for me. Can anyone suggest a better plan than mine to save the disaster of swarming in the honey flow? From this hive I have extracted one super, and another nearly filled, all the rest filling. The hive that had swarmed was the first one from which I lost the swarm in the tree. On May 27 they had raised two cells where I only put one, and as they had been out from Wednesday I decided it too late to return, so made a fourth lot of them.

I do hope the sale of honey will be pushed forward, and all bee-keepers label theirs, as I do, with the date and source of honey. In Rhyl I found terrible stuff sold as pure. Some "S. B." What that meant I don't know, but the sample shown to me was not pure. Some of mine has gone there to prove to the people my honey was not like that. Wishing the "Bee Journal" every success,

Florence Wrench.

Betley, near Crewe.

Propolis Poisoning.

[10685] I notice in the *American Bee Journal* for July, in the Editor's answers (p. 321), a note on poisoning of the hands by propolis. This seems to explain a trouble which I first experienced last year when I had a troublesome inflammation, principally of the left hand, but to a small extent of the right hand also, which persisted throughout the spring and summer months while I was handling combs, and which has recurred to a minor extent this year. I did not at the time attribute the trouble to propolis poisoning, but in the light of the American note I have little doubt that it is attributable to that cause. I consulted a doctor, who gave me an ointment which checked the trouble, but I was not entirely free from it until the close of the season. The inflammation affected principally the left thumb, the skin of which cracked and peeled at least twice. When one is scraping a frame one naturally holds it in the left hand, and uses the tool with the right. Hence the left hand, and particularly the left thumb, is the part most exposed to being smeared with propolis. I have often noticed that this is the case and I use ammonia to remove it. In future I shall be careful to use a glove when handling combs. It would be interesting to know whether other bee-keepers have experienced similar trouble.

C. C. FELIN.

Cambridge, July 13, 1922.

Prices of Appliances.

[10686] In connection with high prices for bee furniture, I had hoped to find references to the rough form in which things are sent out. Metal ends will not slide on as they used to do; frames just rough from the saw or barely planed and yellow foundation for sections, which should be white to correspond with cells.—J. BAXTER.

Wanted, a Queen Excluder.

[10687] I can recommend "Experientia Docet" [10680] a contrivance which should meet his requirements. Take a piece of wood 17 in. long, $\frac{3}{4}$ in. thick, and $\frac{5}{8}$ in. wide, and make sawcuts 5-16 in. deep in the $\frac{3}{8}$-in. faces, $\frac{7}{8}$ in. and $1\frac{3}{8}$ in. from each end. Cut out the wood between each pair of sawcuts. This will fit alongside the top bar of his outermost frame, the W.B.C. metal ends fitting into the cut-out notches. If his body boxes for 12 frames are, like mine, $18\frac{1}{8}$ in. long, the two outer top bars, $\frac{7}{8}$ in. each, and two wooden fillers of $\frac{3}{8}$ in. width, will reduce the extreme opening for bees to $15\frac{1}{8}$ in., which is easily covered by the 16 in. length of the 16 in. by $17\frac{1}{4}$ in. B.B.J. excluder. The excluder should be put directly on the frame tops without border. In these days of sky-high prices it is simply inviting extortion to ask for anything not of standard size.—B. WRIGHT.

Syrup-tin Feeders.

[10688] With regard to feeders made with syrup tins, mentioned in "B.B.J.", June 8, page 282, the holes are often made too big, hence the deluge. I find it a good plan to make holes in bottom with an ordinary sewing needle; if thought necessary, the needle can first be pushed through a cork to prevent breaking, and then gently tapped with a hammer. Three or four holes are quite enough for stimulating. Of course the needle is not fit for sewing afterwards. By having holes in bottom the tin need not be removed for refilling W. J. R.

Profitable Manipulations in the Apiary.

[10689] My attention has been drawn to a critical note from Mr. G. Thomas in your issue of August 31, p. 428. I readily admit that the dogmatic statements to which he refers are open to criticism, but he will forgive me for remarking that they are less so than his own.

The brief and formal report sent to the "B.B.J." by the Monmouthshire B.K.A. is, in my judgment, sufficiently indicative of the cautious manner in which I treated this subject, differentiating between obstructive interference—so much beloved by beginners—and rational manipulation on intelligent lines, giving indications and contra-indications for effecting this and classing various groups of manipulations to suit different purposes and conditions. I need hardly say I have had no share in framing this report, nor had I seen it prior to publication, nor had I any intention of paraphrasing it forthwith, since in due course I shall be publishing in the *Bee World*, though at the risk of some repetition, my views and experiences. Your correspondent and others who were not present at the lecture are welcome then to criticise them.

I need only add, in concluding, that I strongly support the Dadant system of management where extensive apiaries and large hives are concerned, but that is a different matter, which is beyond the present state of British bee-keeping. Nothing which Mr. Thomas is suggesting is incompatible with what I said at Symonds Yat or has not been referred to by myself in the course of my lecture, giving the advantages and disadvantages of such a procedure as he mentions. Meantime, and, in fact, at all times, I have not the leisure for indulging in Press arguments when no full data have been published. —A. Z. ABUSHADY.

A Crowd of Virgin Queens.

[10690] Yesterday (July 28) I was going through a hive with twenty brood frames. I found the original queen was missing, but found six virgins running about on the combs. Another seven left their cells as I was cutting them out, with still another six or seven to come out. This was a hybrid stock. I had never experienced so many queens on the combs of one hive before.

G. A. TAYLOR.

Wickford Whispers.

The strong cold winds we have had of late have put the bees back at least a month. About here some swarms have had to be fed to keep them alive, and sections on stocks have not so much honey in them as they had a month ago.

The white clover was three weeks late in coming into bloom; we always look for it about June 12. This year it was July 5 before there was enough to count for any good. The warm rains of the last few days have brought it out to its best, but it never yields so much when so late. It seems strange, but the honey yield is always over here about August 20; after that date the bees will not build new combs, nor will they seal honey over so well.

We always get a lot of ragwort honey, which is very poor, both for man and bees, and it is this poor honey which gets put in the brood nest for winter as the brood emerges, and much of it never gets sealed over; then a cold snap late in October and the bees, unable to reach the sealed stores, are forced to use this late-gathered honey and diarrhœa follows, or else the bees starve with a nice lot of stores which cannot be reached. In 1920 I lost three stocks out of five in this way.

I hear there have been a lot of swarms round about here, but we have only taken one, on May 26; but I saw a stray cast making off across Squire Kemble's orchard on July 20. I fear it came from one of friend Pavett's hives. My health still being poor, I could not run after it, and so another

cast was "cast" away. This was the first swarm I ever saw making off.

At 3.50 p.m. on Sunday last, while out for a walk across meadows, I found a fine swarm on a stump where a young maple had been cut down, about a yard from its base, in an old bank. My daughter went home for a skep and smoker, and mother to get tea ready! The bees were a good-tempered crowd of the three-yellow banded order. I did not want them, so I took them round to friend Pegg's, who had a small cast on four combs. I gave them three more frames, sprinkled them all with syrup, with just a few drops of peppermint in it, and ran them into the front. I hope all will go well with them. With just a little feeding they should build up into a fine stock. There was about three-quarters of a peck of them.

I see all my stocks are killing off their drones.

Can anyone tell me the best time to take gooseberry cuttings for striking?

Wickford, Essex. C. REED.

July 24, 1922.

Questions, &c., for Bee-Keepers for Self-Examination.

(*Students are recommended to write their answers, and check them afterwards by reference to books.*)

663. In what circumstances is it advisable to reduce the size of the brood-nest, and how can this be done?

664. What qualities in honey (extracted and comb) affect its market value, and why?

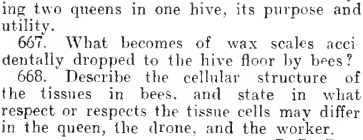
665. What conditions favour an attack of foul brood in an apiary?

666. Describe the Wells system of keeping two queens in one hive, its purpose and utility.

667. What becomes of wax scales accidentally dropped to the hive floor by bees?

668. Describe the cellular structure of the tissues in bees, and state in what respect or respects the tissue cells may differ in the queen, the drone, and the worker.

J. L. B.



A Bee Breeding Scheme.

Mr. Joseph Tinsley, of the College of Agriculture, is at present occupied in the collection of the black bees of Argyllshire, in order to breed from them and restock the districts of Scotland with a healthy and virile race of bees. For several years there has been a disease in bees, which resulted in thousands of colonies being lost and the home produce of honey seriously interfered with. Many foreign races of bees were introduced into this country in order to fill the gap made by the losses, and, while these races have been successful in withstanding the disease, yet, from the point of view of honey production, they are hardly satisfactory. Their chief fault lies in the production of bees, not honey, and are given to excessive swarming. Mr. Tinsley, who is in charge of the Apiculture section of the West of Scotland College of Agriculture, has conducted a vast amount of research and experimental work during the last eight years, and is at present working a scheme financed by the Board of Agriculture for Scotland in the collection of native stocks and breeding from those which have the true characteristics.

Bees have been purchased in the Western Isles, and are at present located at the Kilmarnock College. These undergo certain tests, after which a number of Queens are raised, which in turn are transported to isolated stations for mating purposes. Queens mate on the wing. In order to procure pure mating, it is necessary to restrict all undesirable drones within a radius of five miles. Drones of pure native stocks are reared and transported to these mating stations, which in turn mate with the Queens bred under this scheme.

This is the first work of the kind conducted in Great Britain, and it is hoped that considerable knowledge will be gained not only in this experiment, but in the improvement of the races of bees.—COUNTRY MAN.—From the *Oban Times*.

Bee Shows to Come.

September 14 and 15, in the Cattle Market, Newport.—Newport Allotment Holders' Association Utility Show, in connection with the Mon. B.K.A. Open Classes for Honey.—Hon. Secretary, Mr. J. K. Price, 37, Conrtybella Terrace, Newport (Mon.)

September 16.—Moseley and King's Heath Horticultural Society and South Staffordshire Beekeepers' Association. Five Open Classes for sections, light and medium honey in jars, also beeswax. Several Local Classes.—Schedules from H. C. Weston, 37, Pineapple Road, King's Heath, Birmingham.

September 16 to 22.—British Bee-keepers' Association Annual Show at Grocers' Exhibition, Royal Agricultural Hall, Islington, London.—Schedules from Hon. Secretary, B.B.K.A., 23, Bedford Street, Strand, London, W.C.2. **Entries closed.**

September 21 and 22.—Herts County Beekeepers' Association, Barnet Branch, in connection with Barnet Allotment Holders' Association's Show. Open Classes for 3 1-lb. Bottle and 3 1-lb. Sections, first prize 20s., second prize 15s., third prize 10s.—Schedules from Norris S. Toms, 60, Fitz-John Avenue, Barnet, Herts.

September 20.—Altrincham Agricultural Society. Largest one-day show. Several Classes for honey, etc., both open and local. Good prizes. Send one jar for Gift Class, to be given to Hospital.—Schedules from H. Turner, 1, Market Place, Altrincham.

September 28, 29, 30.—Kent County and Western Divisional Show at the Crystal Palace. Open Classes to United Kingdom (12 classes), Honey, Wax, Mead, Novelty, Scientific.—Schedules from Hon. Show Secretaries, W. E. Clifford, Southlands Road, or E. R. Seadon, Stanley Road, Bromley, Kent.

October 4 and 5.—The Society of the Four Northern Counties limited to Cumberland, Durham, Northumberland, Westmorland, Congress and Fruit Show, also Bees and 15 Classes for

Honey, to be held in the Market Hall, Kendal.—Schedule for Honey Section from G. Chatham, 18, Stramongate, Kendal. **Entries close September 27.**

October 12, at Ongar, in connection with the Ongar and District Agricultural Association.—Extracted and Comb Honey. Open to Essex.—Schedules from G. A. Taylor, Hon. Sec., Ongar and District Bee-keepers' Association, Ashcroft, Ongar.

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One Penny per Wor .

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Advertisements must reach us NOT LATER than FIRST POST on MONDAY MORNING for insertion in the "Journal" the same week.

HAVING retired from exhibiting, my splendid Trophy Stand, second to none, for Sale; price and particulars, with photo, 8d.; also Observatory Hive, stamp.—PEARMAN, Longford Street, Derby. r.j.29

FOR SALE, owner going abroad, five Stocks Bees, 1922 Queens, and quantity Section Racks, Foundation, etc. J. READ, Farm, Wembley. j.31

EXTRACTED ENGLISH HONEY, £7 per cwt.; sample 5d.—DUTTON, Terling, Essex. j.45

GOOD quality Rasp Canes, delivery October, 7s. 9d. per 100, carriage paid.—HUNT, Bank Street, Somercotes, Derbys. a.j.48

HIVES OF BEES for Sale, complete with season's honey.—Apply, DR. HOLLICK, Knowle, Birmingham. j.2

FINEST ENGLISH HONEY, quality guaranteed, in 28-lb. tins, 1s. 3d. per lb; tins free; f.o.r.—HARVEY, Apiarist, Andover. r.h.76

BEESWAX, pure, 5 cwts., packed in ¼-cwt bags, £3 10s. per cwt., f.o.r. London. Box 69, B.B.J. Office, 23, Bedford Street, Strand, W.C.2. j.9

OVERSTOCKED.—Two strong 10-frame Stocks, Bozalla Queens, late 1922, mating not guaranteed, only pure drones flying, £2 15s., carriage paid.—MORRIS, 15, St. John's Road, S.W.18. j.11

TAYLOR'S WHITE SOFT CANDY.

Manufactured from guaranteed pure White Cane Sugar.

1/- per lb., post extra,

or 4lb. parcel, **5/-** post free; 7lb., **8/-** post free; 10lb., **11/-** post free.

Special quotations for large quantities.

TAYLOR'S SYRUP for Autumn feeding.

7lb. tin, **8/9**, post 1/6; 14lb. tin, **16/6** carr. ford.; 28lb. tin, **32/6** carr. ford.

E. H. TAYLOR, Ltd., Beehive Works, WELWYN, HERTS.

PRIVATE ADVERTISEMENTS.

EIGHT ONLY.—Surplus 1922 Dutch-Italian, etc., Queens, 3s. each.—LONGLEY, 35, Tharp Road, Wallington, Surrey. j.24

FOR SALE, two 6-frame Stocks, Italians, late Mr. Smallwood's strain, 1922 Queens, £2 each; box 5s., refunded if returned.—W. DAVIES, Pentre, Northop, Flints. j.25

CABBAGE PLANTS, Harbinger, Early Empress, 9d. per 100; Wallflowers, strong plants, Canterbury Bell, seedlings, 1s. 100; carriage extra.—HEMMING, Appleton, Warrington. j.26

FOR SALE (owing to removal), several Stocks Bees in frame hives; reasonable price.—STEVENS, Cully Hall, Bitton, Bristol. j.27

SOUND BARGAIN.—Eight Stocks healthy Italians in strong hives, Geared Extractor, Ripener, and all Appliances, cheap. CAPT. BUTCHER, Glasbury, Hereford. j.30

THE World's Famous Raspberry, Lloyd George, perpetual fruiting, 30s., 50s., 60s., and 70s. per 100.—J. J. KETTLE, The Violet Farm, Corfe Mullen, Wimborne, Dorset. h.78

SELL.—Two small powerful Acetylene Brass Head Lamps, with separate generator, suitable light car or cycle car, £3 the set; Mills' Automatic Acetylene Generating Plant, suitable for 10-roomed house, £6; quantity of Acetylene Gas Brackets and Chandeliers, prices with particulars; all carriage forward.—HERROD-HEMPSALL, Old Bedford Road, Luton, Beds. c.77

WANTED, small Pump for tank in greenhouse.—Price and particulars to W. HERROD-HEMPSALL, Luton, Beds. f.108

BUSINESS ADVERTISEMENTS.
1½d. per word.

THE WISE BEE-KEEPER looks for quality. The South Hampshire Apiaries breed only from the very best strains. Result: Quality and satisfaction. Beginners' Outfits from £5.—All communications, H. E. NEWTON, New Milton, Hants.

FEW ½ lb. Honey Bottles, 25s. per gross.—HOWARTH, Weymouth House, Purrett Road, London, S.E.18. r.j.23

HONEY FOR FEEDING, in 60-lb. tins, 35s., carriage paid. HARVEY, Apiarist, Andover. j.49

HEALTHY DRIVEN BEES with fertile Queens 10s. 6d., 12s. 6d. per lot; cases 6s., returnable; carriage deducted for bees.—W. WOODS, The Firs Apiary, Normandy, near Guildford. j.28

For best bees, queens and appliances come to PEARSON & GALE, Marlborough.

BUYERS OF FAKENHAM QUEENS return again and again—not for nothing. The choicest examples of true pure Italian Queens are being broadcasted throughout the United Kingdom this season solely because bee-keepers will have them. Recommendation orders are more numerous than ever. One or other of your fellow bee-keepers is almost sure to run a Fakenham queen, or many. They'll gladly tell you why. A low price for sterling value, 7s. each.—ATKINSON, Fakenham. r.j.32

I'VE GOT SOME fine pure Italian Queens for British bee-keepers. Try me. If you don't like them return first post and have your money back, plus postage, by next post.—ATKINSON, Fakenham. r.j.33

"FAKENHAM QUEENS," writes L. K., 21/8/22, "have done exceptionally well this season. Hope to give you order for 20 next spring." Could anything be more convincing of queen value in a difficult season when most bee-keepers have got poor returns or none at all from their hives worth noting.—ATKINSON. r.j.34

AGAIN.—W. B. writes, 9/8/22: "Please forward another. Your queen received before has done exceptionally well." Atkinson's, sure. Them's it! r.j.35

BEAR IN MIND, please, when you receive a Fakenham Queen she is at the outside but six weeks old from her cradle; not merely a vague "1922 queen," but actually a vigorous youngster, ready to take up the lead of the biggest or smallest colony you've got awaiting her. Most are just past the test stage—four to five weeks old. No stale surplus nor oddments are carried, and I know as well as you you don't want that sort.—ATKINSON. r.j.36

WRITES H., 4/9/22: "Your Queens are in strong demand here. I like them, too." They all do. Why not, at 7s. each, too, and beauties! Listen to the next, and not least. r.j.37

"YOUR EFFORTS have certainly succeeded, and the Queens you are producing are all you describe them to be. I am sending you the order that I usually send to Italy this time of year. Please send me 12 queens at your earliest for re-queening. The six I had during the past two weeks are beauties. One, however, disappeared after introduction, while all of the others were laying heavily on examination at the usual period after introduction. One of the first queens you sent had four combs filled with eggs and brood in a week. Few queens are purchased with such vitality. I congratulate you upon your success in thus securing a system of mating that maintains vitality and gives such satisfaction—more than I have ever obtained in my 40 odd years as a bee-keeper. I enclose my cheque."—W. R., September 5, 1922.—Them are ATKINSON'S, Fakenham, and none other. r.j.38

MAGNIFICENT VALUE.—Honey Tins, slightly soiled (perfect inside), with strong handles, bolted lids; dozen 7 lbs., 6s. 6d.; 14 lbs., 10s.; 28 lbs., 17s.; carriage forward; boxes at cost.—BOWEN. j.40

PACKAGE BEES.—Good lots to re-queen or invigorate weak stocks, 12s. 6d.—BOWEN. j.41

EXCELLENT BOTTLES, 1 lb., ½ lb., 9 lb., globes, caps and wads; cheapest rates; 5 gross carriage paid.—BOWEN. j.42

FAMOUS COTSWOLD QUEENS mean high yields next year, 8s., per return.—BOWEN, Coronation Road, Cheltenham. j.43

HONEY FOR BEE FEEDING.—Australian, new, 60-lb. tin, 35s.; West Indian, new, 56 lbs. 38s. 6d.; Californian, old crop, 60 lbs. 30s.; reduction quantities; samples on application.—LONDON TRADING AGENCY, 32, St. Mary Axe, London, E.C.3. r.j.47

YOUNG fertile die-hard Queens of British descent; no bee disease has ever yet wiped them all out; they gather more stores for winter and require less feeding than any other bees: price 10s.; selected, 15s. to 21s. One Queen supplied to each applicant for as long as stock lasts. Thousands of stocks have been sold from this apiary. Established 1866.—PRYOR, Breachwood Green, Hertfordshire. j.46

"W.B.C." HIVES.—Make yours and save pounds. Simplified Working Drawings, novice can understand, 2s. 6d.—CANDY, 28, Dovey Road, Moseley, Birmingham. j.39

CHOICE young Black Queens from specially selected strain, 6s. each.—WITHYCOMBE, Docks, Bridgwater. j.44

IMPORTED ITALIAN QUEENS, Penna or Tortora, 6s.; prompt delivery.—HENSLEY.

MEDICATED SYRUP, autumn feeding (white), cane sugar, 7 lbs., 8s. 6d.; 14, 15s.; 28, 27s.; carriage paid.—HENSLEY.

BOTTLES! BOTTLES!!—Pound screw top, caps and wads, 29s. gross, 3s. dozen.—HENSLEY, Luton Apiary, Chatham. j.13

THROUGH uniting nuclei for wintering, following 1922 Queens for Sale: Imported Dutch Queens, 5s. 6d.; Hybrid Swiss-Italian, 7s.; imported Italian, 8s.; Swiss and Carniolan, 9s.—DAVIDSON, Bee-keeper, Burton-on-Trent. j.14

FERTILE PENNA QUEENS, 6s. 6d.; Hybrids, 6s., per return.—GILBERT STONE, Chelsea Road, Easton, Bristol. b.163

ENGLISH HONEY wanted, any quantity. State lowest price.—Box 88, B.B.J. Office, 23, Bedford Street, Strand, W.C.2.

FERTILE ITALIAN QUEENS by return (weather permitting), 7s. 6d.; Hybrids, 5s.—TICKELL.

CANDY.—7 lbs., 7s. 6d.; 10 lbs., 10s. 6d.; post free. — TICKELL, Westbourne Apiary, Cheltenham. h.159

STRICTLY BUSINESS.—6 lbs. Flavine—S. B. Candy, 7s.; 10 lbs. Flavine Honey Sugar, 10s.; 10 lbs. Autumn Sugar Syrup, 8s.; all carriage paid to any address in Great Britain.—S. H. SMITH, 30, Maid's Causeway, Cambridge. h.23

HONEY, in 60-lb. tins; 30s., f.o.r.; sample, 6d.—COBB. r.h.169.

CANDY, 4 lbs., 4s. 6d.; 10 lbs., 9s. 9d.; larger orders, 9d. per lb., f.o.r.—COBB, 33, Bevan Road, Plumstead. r.h.169

SPECIAL OFFER.—1922 Queens; Hybrids, 6s. 6d.; Imported Italians, 8s.; Imported Carniolan, 9s.; until sold; safe delivery guaranteed.—C. T. OVERTON & SONS, Crawley, Sussex. h.170

TO ALL SECRETARIES and BEE-KEEPERS.—Send to me for samples of Honey for autumn feeding.—F. GOODRICH, 10, Weston Park, Crouch End, London. h.106

JACK TICKELL.—For Queens, Stocks and Nuclei. List free. — Westbourne Apiary, Cheltenham. r.a.54

ITALIAN QUEENS by RETURN OF POST. Tested, 9s. 6d.; Untested, 7s. 6d.—PEARSON & GALE, Marlborough.

The Bee-Keepers' Calendar.

SEPTEMBER, 1922

21 Thursday. "Sometimes we travail on the summer shelves
Of early bees, and busy toils commence,
Watched by wise men, that know not we are elves,
But gaze and marvel at our stretch of sense,
And praise our human-like intelligence."
T. Hood, "Midsummer Fairies."

22 Friday. Leave winter passages above the combs and cover down warmly.

23 Saturday. "Buttercup's lanterns are lighted about me,
Burly red clover's warm cheek presses mine;
Powdery bee never once seems to doubt me,
Tipping each chalice for summer's new wine!"
Margaret Deland.

24 Sunday. "Sure thou wilt joy by gaining me
To fly home like a laden bee
Unto that hive of beams
And garland streams."—*George Herbert, "The Star."*

25 Monday. "In untamed yet gracious order
Flowers flourish as they will,
And in every bed and border
Wealthy bees can sip their fill."
Christian Burke, "The Garden that I Love."

26 Tuesday. "Blaw, blaw ye wastlin' winds, blaw saft
Amang the leafy trees,
Wi' gentle gale frae hill and dale
Bring hame the laden bees."—*Burns, "O' a' the airts."*

27 Wednesday. "The time a summer home of murmurous wings."
Tennyson, "The Gardener's Daughter."

British Bee-Keepers' Association.

ANNUAL SHOW.

The above is being held in connection with the Grocery and Allied Trades Exhibition at the Agricultural Hall, Islington. The entries are not so numerous as last year, but are quite up to the usual high standard. In the appliance classes there is an improvement in both material and workmanship, especially of the hives and other woodwork. In Class 5, which is practically for any new appliance connected with bee-keeping, Mr. E. Bliss secured first prize for a very ingenious travelling box for bees, with or without combs. No screws or nails are used to fasten the lid down, this being done by the handle for carrying the box. When in position the handle, which is round, is passed through a couple of holes in the upstanding ends of the box, and is tied fast. When it is desired to remove the lid, the handle is taken out, and the lid may then be lifted off. Messrs. E. H. Taylor were awarded second prize for an improved Porter bee escape, having four bee-ways instead of one, the whole arrangement being about the same size as the ordinary escape. The third prize went to Mr. E. G. Burtt, for a travelling

box for twelve 1-lb. jars. Mr. Meadows exhibited his new hive tool, a very ingenious and useful appliance, and also "Dempsey" smoker made of steel. It has a regulating draught chamber and other novel features. In Class 21, exhibit of an interesting nature, there were only three exhibits. The most noticeable being two cakes of candy exhibited by Mr. G. Bryden, one of them containing a proportion of pollen from the *Cedar atlantica*, which was awarded first prize. Class 22, exhibit of a scientific nature, had only two entries. In this class Mr. Bryden also took first prize for an exhibit of a series of photographs of the *Cedar atlantica*, showing the catkins, which bear an abundance of pollen, the cones, etc., and a jar containing about a pint of the pollen, which is of a pleasing shade of yellow. Mr. G. A. Taylor was awarded second prize for a collection of nine frames of different standards, including all those best known, British Standard, Commercial, Langstroth, Gallup, etc. The honey—sections, extracted, and shallow combs—is all of the highest quality, but does not call for special comment. Messrs. A. Richards and J. Price had the difficult task of judging, the following being the awards:—

Class 1.—Collection of Appliances.—1, Mr. R. Lee, Uxbridge; 2, Messrs. C. T. Overton & Sons, Crawley.

Class 2.—Best Frame Hive for general use.—1, Mr. R. Lee; 2, Messrs. E. H. Taylor, Ltd., Welwyn.

Class 3.—Inexpensive Frame Hive for cottager's use.—1, Mr. R. Lee; 2, Messrs. E. H. Taylor, Ltd.

Class 4.—Honey Extractor.—1, Mr. W. P. Meadows.

Class 5.—Any Appliance to which no prize has been awarded at a show of the B.B.K.A.—1, Mr. E. Bliss, Dunstable; 2, Messrs. E. H. Taylor, Ltd.; 3, Mr. E. G. Burtt, Stroud Road, Gloucester.

NORTHERN COUNTIES SECTION.

Class 6.—Six Sections of Comb Honey.—1, Mr. J. Scott, Wooler, Northumberland; 2, Mr. W. Garwell, Heeley, Sheffield; 3, Mr. D. J. Griffiths, Felinfoel, Llanelly.

Class 7.—Six Jars Extracted Light Honey.—1, Mr. W. C. House, Ponty Clun, Glamorgan; 2, Dr. G. R. Strong, Magor, Mon.; 3, Rev. W. H. Richardson, Wolverhampton; v.h.c., Rev. W. H. Richardson; c., Mr. D. J. Griffiths.

Class 8.—Six Jars Medium or Dark Honey.—1, Mr. J. B. Leighton, Stafford; 2, Mr. W. C. House; 3, Mr. W. J. Watkins, Ponty Clun, Glam.; v.h.c., Mr. H. Aubrey, Felinfoel, Llanelly; h.c., Mr. J. Chadwick, Sowerby, Yorks.

Class 9.—Six Jars Granulated Honey.—1, Mr. J. B. Leighton; 2, Dr. G. R. Strong; 3, Messrs. Gordon & Sons, Stirling; v.h.c., Mr. J. Chadwick; c., Mr. H. Aubrey.

SOUTHERN COUNTIES SECTION.

Class 10.—Six Sections.—1, Miss L. D. Herbert, Wonersh, Guildford; 2, Mr. E. J. Brown, Corsham, Kent; 3, Mr. G. Bryden, Rochester; v.h.c., Mr. E. E. Hodson, Huntingdon; c., Mr. G. A. Taylor, Marden Ash, Ongar.

Class 11.—Six Jars Extracted Light Honey.—1, Mr. G. Bryden; 2, Miss M. Whyte-Johnstone, Reigate; 3, Mr. F. Holland, Dunstable; v.h.c., Mr. R. R. Babbage, Brentford; h.c., Mr. W. J. Cooper, East Molesey.

Class 12.—Six Jars Medium or Dark Honey.—1, Mr. G. Bryden; 2, Mr. A. C. J. Sainty, Slough; 3, Mr. W. J. Cooper, East Molesey.

Class 13.—Six Jars Granulated Honey.—1, Messrs. Thos. Wells & Co., Isleham, Cambs.; 2, Mr. G. Bryden; 3, Miss Whyte-Johnstone; v.h.c., Mr. E. Bliss; h.c., Mr. G. A. Taylor.

OPEN CLASSES.

Class 14.—Two Shallow Combs.—1, Mr. R. R. Babbage; 2, Mr. G. Bryden; 3, Mr. E. C. R. White, Winterbourne Gunner, Salisbury; v.h.c., Mr. W. J. Cooper; h.c., Mr. G. A. Taylor.

Class 15.—Six Jars Heather Honey.—1, Messrs. Gordon & Sons; 2, Mr. M. Partrige, Cannock; 3, Mr. D. Wilson, Belper.

Class 16.—Six Jars Heather Mixture.—1, Mr. E. G. Waldock, Onslow Village, Guildford; 2, Mr. G. Bryden; 3, Messrs. Gordon & Sons.

Class 17.—Best and Most Attractive Display of Honey and Honey Products.—1, Mr. G. Bryden; 2, Mr. G. A. Taylor; 3, Miss M. Whyte-Johnstone.

Class 18.—Three lbs. Beeswax, in shape and form suitable for the retail trade.—1, Mr. F. Harris, Sibsey, Lincs.; 2, Mr. E. C. R. White; 3, Mrs. I. Scott, Brandesburton, Hull.

Class 19.—Honey Vinegar.—1, Mr. J. B. Leighton; 2, Mr. D. Wilson.

Class 20.—Mead.—1, Mrs. I. Scott; 2, Mr. J. B. Leighton; 3, Mr. G. Bryden.

Class 21.—Exhibit of an interesting nature.—1, Mr. G. Bryden; 2, Mr. D. Wilson; 3, Mr. G. A. Taylor.

Class 22.—Exhibit of a scientific nature.—1, Mr. G. Bryden; 2, Mr. G. A. Taylor.

The W.B.C. Gold Memorial Medal for the most points was won by Mr. G. Bryden.

A Dorset Yarn.

"Our success (in life) is measured by the amount of brains that go into our business."

When a fruit grower visited the farm a short time back he said he took over a business founded by his father. He had only to follow on as he had done, adding field after field to the holding, until it reached a great acreage. It is so with men to-day. If they have used their brains for their own advantage they will soon find that small enterprises will gradually lead up to big ones, the first few years' progress somewhat slow and hard, but if you can see enough to live on each year, the produce on the land will keep on increasing; with some crops they will be double each year; if the same amount of energy is put into it you will soon have a good bank balance.

A gentleman's gardener came this last week; he has a pleasant position with the owner, but no means to advance his income, so he has taken bees as a means to add to his bank balance. These he does entirely himself. He has read many books about them; he is able to produce a good weight of surplus each year. His own words were he "had never had a bad one," some years a good deal better than others. I had to ask him which paid him best. He said extracted honey, as he had three times the weight. He could sell all he produced; each year he added more stocks. Some went under, but it was mostly the stronger robbed out the weaker. Once he was cleaned out with disease (in his first year or two), so he has had a varied experience. He did best with yellows mated with blacks. Here he shows that he has used his brains in observation; he has had the same results as have been enumerated in American apiculture. In the May number of *Gleanings* (sent me from Florida) one writer says "we are pleased when our Italians mismate," and further states, "pleased at the big crops,

and are quite callous to the few extra stings that were thrown in with the honey harvested." This horticulturist bee-keeper has certainly put his best brains into harvesting honey. His best honey was from his June extracting. He could not tell its source, because on this large place bees sampled everything where there was nectar and pollen. His August harvest was the heaviest, deeper in colour and not very dense, but, strange to say, this lot sold the best. It was cleared out by the shops in a very short time; in his opinion it was not so good by many points. The very pale-coloured lot in June did not go off so quick; never asked where he sold it, locality may make a great difference to that. Near the sea in August honey sells very freely, as there are so many visitors; this success is measured by the amount of brains he put into his business. This was done in his spare moments and in his own time. He has an energetic wife who was a great help to him with the honey; this is as it should be; when both work together for one object, their success is assured.

One visitor from the borders of Herefordshire and Wales gave me a most interesting yarn of his trials with re-queening his stocks with Carniolans. I advised him to write it off as he described it to me and send it to the JOURNAL. After confining the queen in the hive for 3 days, when loosed the bees balled her. This happened 2 or 3 times; he tried with nuclei, and to make it short he was successful in the end; some men never will be beaten. "Success is measured by the amount of brains put into the business."

Another delightful visit was from Mr. and Mrs. Arnold Hiller from Dumington Heath, Alcester, a bee-keeper and large fruit-grower. He has many acres of strawberries, rasps and currants. He, and other fruit-growers in his district, did not get good returns for the fruit, so they put up the capital between them, opened up a market in Coventry with a turnover of many hundreds each week. If these growers had not done this they could never have taken a holiday, as the dealers and salesmen would get the profits when it should go to the grower. He tells me his soil must be richer than ours, as his rasps are half as high again as ours. The fruit will grow larger. It must be he has some of that rich vein of potassic salts that is in the Evesham area, where the plums grow so plentifully and asparagus grows without much trouble. Of course bees do well on the large fruit area, honey in most years is very plentiful. Success here again is by "the amount of brains put into the business." Our soil is short of potash, we are now adding many tons of Alsatian kainit to our lands; it is cheaper now than before the war, when the Germans owned the mines and had a tax on all exported. It will be a good investment, as the more liberal growth in the rasps and currants will mean more food for the bees, as well as the extra weight of fruit that will follow by extra plant food in the soil. Three other gentlemen from the Midlands who were staying at Swanage wired if they could come over to the farm. One of them—Mr. Bland—was a keen bee-keeper. He spent a nice time with us. The lines of bush fruits and rasps seemed to interest him most. He has an acre and a half of garden, well planted up for his bees. J. J. KETTLE.

Jottings from Huntingdonshire

It has been a week of squalls. Rain and wind frequently gave way to scalding sunshine; cloudy days were followed by starless nights, and dull black nights by mornings of glorious and promising brightness, but generally storms blew up before mid-day. This, it need hardly be said, has not been conducive to the storing of honey, but withall the surplus for winter has been increased. My strongest hive in bees and honey is smothered in grass—one more proof that hives hugger-mugger do well; but why, I am not yet able to definitely declare. This particular hive was placed in a clover field 16 months ago. It did remarkably well last year, and the farmer was delighted with his yield of seed. Not until the clover was cut could one see the alighting board. In early autumn came the plough; the ploughmen thought it in the road, so lifted it bodily to the other side of a hedge and placed it down with the entrance facing north. On seeing it thus set, my first thought was to turn it round to face south-east, but, recalling Nutt's advice to winter bees in hives facing north, I left the stock as it stood. Early in the new year these bees began to stir, and were not in the least deterred by the growing grass half smothering the entrance. They went merrily on, and by May the grass had almost hidden the hive from view; the bees seemed rather to rejoice than otherwise. I took off a first rack of sections on May 24, and ever since that stock has refused to look back. I have again and again noticed that bees do better when their entrance is half covered—but why? There must be a reason. Extra shade? But this summer such has not been needed. Protection against wasps? But that will apply only to the latter months of summer. Is it, I wonder, that bees coming home late at night, heavily laden, and fall, are able to crawl up to the entrance, where otherwise they might stay out and get chilled? If this were all, extension boards would be sufficient to supply the loss of a medium to crawl to the entrance from the ground. These extensions, however, have their disadvantages. They are (1) a delightful inclined plane for toads to waddle up, and (2) a convenient resting-place when robber bees decide on making a mass attack.

With the weak stocks, one is pushing on with feeding; by weak one means weak in stores, but not in numbers. It must be rapid feeding with thick syrup now; by lifting up the back of the hive now and again one can gauge whether the storage of foodstuff is going on satisfactorily. Those who, like myself, are making use of treacle tins

will be well advised to get sheets of cardboard and cut holes just large enough to allow the tin to pass through. This placed on the brood nest gives additional warmth where the feeding is in progress, and prevents bees creeping up around the tin when refilling is going on. Wasps will soon be a back number for 1922, but beware—a brief spell of warmth may cause trouble as the plums are being removed from the trees. Moreover, many queen wasps will select the hive roofs for their winter quarters. They may be harmless and destroy many flies, yet, with all respect to the views held by Mr. S. H. Smith, a dead queen wasp saves a lot of trouble later on. Hornets have not been very prominent this year—and what a blessing! I recall how, a few seasons ago, a small number of hornets so decimated a stock of bees that the rest forsook the hive rather than continue the conflict. It is rarely bees are cowards, but they show the white flag in the presence of hornets. Perhaps it is not cowardice, but rather a fear lest their race should be wiped out. Our next enemies in the apiary will be mice and tits. Flocks of fieldfares have returned, and that cannot bespeak any other news than the approach of winter. We are, nevertheless, cheered at the number of swallows still remaining, and still hope for a few belated summer days.—E. F. Hemming, Steeple Gidding.

Week-End Bee-Keeping

By S. H. Smith, Cambridge.

(*Continued from page* 449.)

I would have given something to have been able to recall those words about swarms being taboo in that apiary. As it was, and there being nobody within hearing, the best I could do was to relieve my feelings by uttering some choice expletives. But it is no use to cry over spilled milk, and the beekeeper who starts to cultivate the tear-jar habit would need amphoras as large as beer barrels.

The swarming bees did the usual stunts, and whirled and hummed overhead; then their flight took a sideways direction, and they steered towards some apple trees. "D. B." followed, and when he was out of sight I made some swift moves.

First, I made sure the clipped queen was in the grass in front of No. 7; then I went to the honey house, filled a brood chamber with waxed and wired frames of foundation, and carried it to No. 7. A clean floorboard followed, and then the smoker and hive tool. Returning to the shade, I lighted a fresh pipe, and awaited the arrival of "D. B."

In about five minutes here he came, running, beaming all over, and quite excited. "Lend me a skep and a cloth, old man; I'd like to try my hand at raking in that swarm. The bees are nicely bunched on a branch and within easy reach."

"There will be no need to do anything, 'D. B.' Those bees are minus their queen, and they will return to their hive very shortly. You will now see the advantage of clipping the wings of a queen. If not in the apiary at the time the swarm issues, you might lose the queen, but the bees will be there for some days at least. If you were to visit the apiary betweentimes, an outside diagnosis would tell you that all was not normal, and an examination would reveal the cause.

"If, however, another swarm should be out at the same time and a queen was with it, your queenless bees would join it. It all goes to show that constant and regular attention is needed in an apiary.

"It is, of course, my fault that that stock swarmed. I must have overlooked a queen-cell when I supered it last Saturday. As I said, the bees will return, but they will swarm again in a few days. If the old queen did not find her way back, they would go out with the young one, and if we were not here, we should lose them.

"Once a stock swarms it is best to change the furniture of the hive to divert the swarming impulse to some other outlet of energy. This we do by giving another brood chamber and following the Demaree plan. We shall cut out the offending queen-cell, and it will come in very handy to use in skep 'B.' Let us go to work and have everything ready before the bees return.

"No. 7 goes forward about a yard. You have not forgotten our motion exercises. The clean floorboard takes its place on the bricks, and the clean brood chamber goes on it. Now we transfer the bees.

"Off comes the super; then the excluder. There are still quite a number of bees in the stock. Not all of them become infected with the swarming fever. Now we will search the combs for the cause of the trouble. There it is—a peach, too—hanging right at the bottom of the fourth comb. A blind man should not have missed it.

"We put three combs of bees and brood into the new brood chamber and fill it up with the frames of foundation. The excluder goes on, and we put on all the other combs, first cutting out the queen-cell. The frames of foundation fill it up, the super is returned, and the lifts and roof.

"Now please look for the queen. Yes, she is with that little bunch of bees over there. They have travelled nearly ten feet away. Better let her climb on to a twig rather than catch her with your fingers. Now let her run into the hive, and she will soon find her way on to the combs. We were just in time. 'D. B.'; here come the bees.

"Now to re-queen skep 'B.' You notice I've cut a triangular piece of comb, about two inches high, above the queen-cell. That will enable us to pin it on the surface of one of the combs, between which I cut out that piece to fit in the little frame. Give me a pin. 'D. B.,' please. What! No pin? I thought every married man carried a supply concealed on his clothes. Of course, of course. In these days of one-piece dresses and other things, a pin is a back number, and maybe so am I. Never mind, if I cut off the head of a match and

sharpen the point, it will act just as well as any pin.

"There. Skep 'B' has now a fine Italian queen-cell, and with luck its bees will be Italians in a few weeks. Before we turn it down I should like to initiate you, 'D. B.,' into the 'Ancient Order of English Skep-pists.'

"We dig out a piece of skep honey, but before we sample it kindly repeat after me the words: 'The bee is little among such as fly, but her fruit is the chief of sweet things.' Now go to it. What do you make of it?"

"Warm, sweet, but—but—musty!" I agree, and I do not hanker after honey direct from the skep. But the honey from supered skeps is just as good as any other.

"No, there is no initiation fee. It is only a little ceremony no old-timer would think of omitting when examining a skep when a nectar flow is on. Why did I omit the frying pan and door-key ceremony when the bees swarmed? For one thing, because we do not encourage swarms; for another, because there does not seem to be any particular reason for such doings.

"It won't take us ten minutes to put supers on the stocks that need them. And, to tell the truth, that was all I intended to do today, 'D. B.,' but look what a dance you have led me. There will not be time to go into details about the cost of starting bee-keeping with a couple of skeps, but I will bring the figures with me next week when I come to your apiary. So long, old man; if you hustle you will be home in time for tea."

(To be continued.)

Economies of the Hive.

By E. C. Hipkins, B.Sc.

What follows is intended to set forth a certain viewpoint from which it would be well for bee-keepers to examine any proposed operation before carrying it into effect. Whatever the opinion of the reader on the deductions, the truth of the fundamental principle must be admitted. This principle should never be lost sight of when a colony is desired to yield a large surplus.

It is proposed to consider the events which occur in a normal colony which has wintered successfully in the natural state, unstimulated by artificial feeding or any manipulation.

In the spring, the queen commences laying in a small patch in the centre of the cluster. The size of this patch will depend upon the quality and quantity of stores available, on the temperature of the cluster, and on the number of nurse bees in the colony.

As the season advances we have the following conditions, all stimulating the queen to further activity:—

(1) The weather, tending to become continuously warmer, encouraging extension of the brood nest.

(2) The arrival of nectar from the fields in ever-increasing quantities.

(3) The hatching of brood in increasing numbers, furnishing an increasing force of nurse bees.

The combined effect of all these factors is gradually to stimulate the queen to increase her rate of laying until she reaches her maximum output.

Whilst a colony is in this state of building up, no matter what amount of nectar may be available, no appreciable amount of surplus can be stored; the majority of the nectar collected by the few fielders being used in feeding the larvæ and young bees within the hive.

In due course, the earlier brood, passing through the stages of larvæ, pupa, nymph, nurse-bee, etc., join the ranks of the fielders whose numbers gradually increase until they reach such a strength that the new fielders are only sufficient to replace casualties, and the forces of the hive are in equilibrium.

Whatever manipulations it is proposed to carry out to increase surplus this condition of equilibrium must be established early in the spring to get the highest possible yield from a colony.

Clearly, the size of a colony when in this condition of natural equilibrium will depend on two factors only:—The fecundity of the queen and the longevity of her offspring. Both these points are therefore of vast importance in the selection of mothers for our colonies, and it is assumed in these notes that these points, together with non-swarming and the working capacity of their progeny have received careful consideration in all cases.

It will be seen that, under similar conditions, more prolific queens may be limited by natural conditions where less prolific ones are able to develop their full capacity; the former thus being rendered slower in establishing equilibrium than the latter; and it may easily be that many of the statements made by bee-keepers who, being used to native varieties, have tried more prolific foreign strains to the effect that the latter are inferior to native varieties as honey gatherers, may be attributed to the fact that equilibrium was not established sufficiently early in the season. Hence, it is of vital importance that everything possible should be done to stimulate the queen to her full capacity early in the spring.

It is not therefore sufficient to pack bees down in the autumn with sufficient protection and stores to enable them to survive the winter, but they must be so packed and fed as to ensure that the queen will commence laying at the earliest possible date in the spring. Judicious brood-spreading, scratching of sealed stores, and, if necessary, slow feeding, should also be carried out as soon as weather conditions allow.

Careful attention to the above points, together with manipulations to prevent swarming, should ensure a stock being sufficiently near the desired equilibrium at the beginning of the flow.

Equilibrium, once established, can be lis-

turbed by the removal of any bees, brood, or eggs, or by any change in the rate of laying of the queen. This change in the rate of laying commences to affect the quantity of brood in the hive, and, consequently, the amount of food consumed within three days of the change. It does not, however, affect the rate of reinforcement of the field force until five or six weeks have elapsed, as the bee does not commence work in the field until about thirty-eight days after the laying of the egg. This fact should always be borne in mind, and manipulations carried out so as to take advantage of it.

It will be of interest to consider the effect of various natural occurrences and artificial manipulations on the equilibrium of a colony, and afterwards to consider how to minimise their ill-effects and to turn their good effects to the best account.

Any check in laying or removal of brood or workers from the colony before the establishment of equilibrium must of necessity delay such establishment, and so delay the colony in reaching the condition in which it can furnish the strongest possible field force. For this reason increase by artificial swarming, dividing, etc., should not be practised in the spring on stocks which are to be run for honey.

The equilibrium of a balance stock can be seriously upset by swarming, the natural effect of which is to split the stock into two unbalanced stocks, the swarm, consisting of the majority of the field force and the older of the nurse bees, headed by the old queen and the parent colony containing all the brood, the younger nurse bees and a few fielders.

The swarm has, at first, practically the whole of the field force of the original colony and no brood to consume stores collected. It is therefore at the moment in an ideal condition for surplus storage. Unfortunately, however, swarming generally occurs during a pause in the honey flow, and there is, therefore, little nectar available for this force to collect. This field force is subject to the same losses as before, and, as there is no hatching brood to replace nurse bees to make good the loss the force must continue to fall off until a period of five or six weeks after the commencement of oviposition has elapsed. Hence, when the main flow commences the field force will have fallen off considerably in strength, and if left to itself will be building up to a state of equilibrium during the flow.

By the provision of drawn-out comb, and, if possible, a little unsealed brood, the queen will be encouraged to lay early, and thus reduce the period during which the field force is without reinforcement to the minimum of thirty-eight days; the dwindling of the field force can be reduced to its lowest limit, and by the restriction of the brood nest immediately the main flow commences the queen can be hampered in her laying, and an artificial equilibrium established on a smaller scale than the natural equilibrium which would otherwise be established too late to be of any use.

The parent colony, consisting, as it does, chiefly of young nurse bees and brood, with all the stores of the colony and headed by a virgin queen will, in the ordinary course, consume the majority of the stores in the feeding of brood. Its very small field force will receive heavy reinforcements for the first five weeks when there will be a pause, averaging about a fortnight, equal to the time taken by the new queen to commence oviposition. This pause can be very much reduced by the introduction of a fertile queen and the removal of the virgin or queen cells from the hive.

In this case again, restriction of the brood nest is advisable with a view to the establishment of an artificial equilibrium.

De queening.—The effect of de-queening is, of course, to arrest oviposition. Its effect on the consumption of stores will be felt in three days, whilst it will not affect the reinforcement of the field force until after the lapse of thirty-eight days. After this lapse of time the field force will commence to fall off, and will continue to do so for as many days as the queen has been absent. After that, reinforcement at the full rate will commence, so that the field force being now smaller, the strength will increase daily by the amount which the reinforcements exceed the casualties, and the colony will return to equilibrium.

Changing of Queens.—In the changing of queens we have to consider, in addition to the loss of time due to the period elapsing between oviposition by the old queen and oviposition by the new one, which is the same as that occasioned by removing the queen and returning her, the fact that the new queen will not lay at the same rate as her predecessor.

Queens are generally superseded on account of age, and it is very probable that the new queen will be more prolific than the old one. When, therefore, reinforcement of the field force commences, we have not only the losses during the period of stoppage to make good, but also to build up the field to a standard sufficient to be in equilibrium with the increased rate of reinforcement from the larger brood nest. This will take a considerable time to attain.

It will be clearly seen that, except in cases where queens have given tangible evidence of failing powers or when no other method appears possible to prevent swarming, it is not advisable to interfere with them prior to the honey flow.

Even if their oviposition falls below that of queens in other hives, it is not always advisable to change them for more prolific ones, especially in the late spring or early summer, as the result will be that the amount of brood, etc., will be heavily increased without any very large increase in the field force available during the flow.

It will be shown later how the "lag" between the effect of de-queening on brood and field force can best be taken advantage of for the purpose of increasing the amount of surplus stored.

(To be continued.)

The Snelgrove Method of Queen Introduction.

In your issue of September 7 you publish a report of the summer meeting of the Somerset B.K.A. at Cannington, where I gave a demonstration of my method of direct queen introduction. As the report is necessarily brief, and in one respect somewhat misleading, I am sending you fuller particulars of the method for the information of your readers, believing that, once it has been more generally tried, it will, on account of its simplicity and efficacy, largely supersede all other methods of queen introduction.

Some of your readers will remember that I read a paper on this method at a meeting of the British Beekeepers' Association in London in October, 1911. At that time my experiments had been limited in number, and I remember that some of those present counselled caution in applying the method to "valuable" queens. You will be interested to learn, however, that during the last eleven years I have used this method exclusively, and have introduced large numbers of fertile queens, valuable and otherwise, *without experiencing a single failure*. A number of my beekeeping friends have had the same success.

The chief disadvantages of introduction by the ordinary caging methods are as follow :—

(1) There is a period of some days during which the colony is without a laying queen.

(2) The beekeeper must pay two or three visits to the hive—a great inconvenience if this be situated at a distance.

(3) It is necessary to provide suitable food for the queen during her imprisonment.

(Even Mr. Simmins' admirable direct method involves a period of queenlessness and at least two visits to the hive, one for de-queening and the other for introducing the new queen.)

The advantages of my method are as follow :—

(1) There is no period of queenlessness, the new queen being introduced and liberated immediately her predecessor has been removed.

(2) Only one visit to the hive is involved.

(3) No special apparatus is needed and no food is to be provided for the queen.

(4) A queen "in full lay" will continue to lay eggs in the new colony on the same day on which she is introduced. There is thus no considerable cessation of brood rearing.

(5) A colony will accept a queen when introduced by this method in any circumstances under which she would be accepted if introduced by any other method.

Since 1911 I have simplified my procedure, the directions for which are :—

Place the queen to be introduced in an empty match-box. Open this slightly and fill it with tepid water (cold water will do in warm weather). Shake the box gently to and fro four or five times to make sure that the body of the queen is entirely covered with a film of water. Pour the water out and allow the queen to walk down amongst the bees through the feed-hole in the quilt. A puff of smoke may be given, but is not necessary. Cover the hive at once, and do not disturb it for two days.

I am not sure that the last precaution is necessary, but I think it is a wise one. I usually invert the match-box, place it over a space between the frames, push it open with the finger, and so allow the queen to walk down without troubling to watch her, leaving the box in position when covering down. I seldom examine a hive subsequently in order to see if the introduction has been successful, for, having had no failure, I take this for granted.

The immersion of the queen need not last more than 15 to 20 seconds, and the whole operation of introduction can be performed in about one minute. Although the queen is naturally greatly incommoded by her bath, the bees soon lick her dry, and she is quite herself again within five minutes. Some people have suggested that it may be cruel to immerse a queen for a few seconds, but to my mind the discomfort of a compulsory bath is not comparable to the terror which a queen, confined in a small wire cage, probably experiences when exposed for many hours to a host of implacable enemies, less than an inch distant, all vainly endeavouring to reach her through the bars of her prison.

I consider that a queen, after immersion in water, is accepted by a strange colony for two reasons :—

(1) She is much too uncomfortable and frightened to show hostility to the strange bees.

(2) Her characteristic scent has been masked or destroyed. The bees do not distinguish her from their own queen, and therefore treat her kindly.

As in the case of the ordinary methods of queen introduction, the following points should not be overlooked :—

(1) The method does not apply to the introduction of virgin queens.

(2) The second day (*i.e.*, the day after de-queening a stock) is the least favourable for the reception of a strange queen.

(3) If queen-cells are being raised, they should be broken down before a new queen is introduced.

To show the reliability of my method, I have recently given two demonstrations at meetings of beekeepers. At Bath on July 1 the members of the local branch of the S.B.K.A. watched me open two hives and successfully exchange and liberate their queens, a feat which I venture to say would be considered impossible by the great majority of beekeepers. The local secretary and owner of the bees subsequently wrote to me on August 21 :—

"Your pretty conjuring trick with the two queens was absolutely a success; the two hives with their exchanged queens went on working exactly as if nothing had happened to them. I am filled with admiration of this clever way of re-queening, and so were the other beekeepers who saw it done."

On August 19 I repeated this experiment at Cannington before a gathering of 120 members of the Somerset B.K.A., Mr. Cowan

being amongst those present. Two hours later both queens were found walking about happily in their exchanged colonies, and were placed in test-tubes and passed round for inspection by the members.

I should say here that, if it be necessary to disturb a hive so soon after the introduction of a queen it is as well to dip her again in water before closing down the hive, as the bees appear occasionally to discover the deception which has been practised upon them, when they are greatly disturbed.

I am sending you these notes so that any of your readers who wish to try the method may know exactly how to proceed. I am sure that any beekeeper who has once used it will not revert to the older and more troublesome methods.

L. E. SNELGROVE,
(Chairman Somerset B.K.A.).

[Since the report of the meeting at Cannington appeared we have had a number of requests to publish Mr. Snelgrove's method of re-queening, and intended reprinting it from the report in 1911. We, and we are sure our readers also, are much obliged to Mr. Snelgrove for these notes, brought up to date.]

Notes from Cambridgeshire.

Feeding.—Honey came in fairly well for a short time when the sainfoin came into flower at the end of May, but the weather soon broke up, and a prolonged period of cold days and nights, with strong winds and heavy showers lasting right up to the present time, has resulted in many stocks being short of food. Though surrounded by fields of mustard and with sainfoin in flower again (the latter rather a poor crop this time), little or no nectar has been gathered. Where full-depth combs of honey worked in supers are not available in sufficient number, rapid feeding with sugar syrup should be resorted to without delay. Much trouble is saved by feeding early—say, towards the end of August or the very beginning of September at latest. The bees take the food more readily, and there is no need to warm it. They also have plenty of time to store and seal it before cold weather begins. I prefer the Round Tin Feeder as the handiest and most efficient for the purpose. I also tried a Division Board Feeder for the first time this year, but it warped and leaked so that the syrup ran out of the hive entrance! Fortunately, this did not result in robbing. This feeder is well adapted for stimulating queen-rearing colonies and nuclei earlier in the year by giving very small quantities of syrup, but it is not very safe for larger amounts, and had better not be used.

In examining stocks to ascertain what stores they possess and how much food they require great care is necessary at this time of the year. Bees are never so good-tempered now as in the spring or during a honey flow. Few stocks this season are likely to have any combs of honey to spare for their poorer neighbours; some will be found practically destitute. Such stocks sometimes sting badly, and are difficult to subdue with smoke. It is advisable to feed them for a day or two first before making a thorough examination.

Beginners need to know how much syrup it is necessary to feed to produce a given amount of sealed stores. Doubtless this varies with varying conditions. Dr. Brünnich, in the Swiss *Bienen-Zeitung*, after repeated experiments, says the amount of stores sealed by the bees is equal to the weight of sugar used in making the syrup. The Editors of the *B.B.J.*, in answer to my query some years ago, put it rather higher—viz., about 1¼ lb. of sealed stores to every pound of sugar made into syrup, using the ordinary proportions of sugar and water. In any case, feed liberally and winter on about 30 lb. of sealed stores. There will then be no need of candy, and no further feeding to be done in the spring. The knowledge that the bees are well provided for makes it unnecessary to chill the stocks by too early examination in spring, and an ample food supply then means rapid development, ready for the next honey harvest.

L. ILLINGWORTH.

Foxton, Cambs., Aug. 25.

Cotswold Notes.

I often notice when driving cottagers' bees, which I often do at this period of the year, that the skeppist frequently keeps the wrong stocks because he will "take up," as he calls it, the casts and old stocks and keep the current year's swarms for stock.

This is a mistake, because he is sacrificing all the young queens with clean combs of beautiful hatching brood and keeping all the old ones; much of the comb being of drone cells.

The difference in the amount of brood between the swarm with its old queen and the vigorous cast is an eye-opener to the novice.

Assuming perhaps that the skeppist commences the season with three old stocks, and that each throws a swarm and cast, he will have nine colonies at "taking-up time." Indeed, this season as many as twelve or sixteen have been obtained from three or so old stocks.

Some evening he lifts them. The casts are rarely full, and will weigh anything between 10 lb. and 18 lb.

They possess much brood, strong young bees, and much worker comb.

Some seasons, unless sticks have been placed across in the customary style, it is often dangerous to lift them up. Now they are so light that the combs can be inspected without fear of them toppling over.

The old stocks and first swarms will vary much in weight from 15 lb. to 35 lb., according to the size of skep.

The swarms will possess some nice combs of clear sainfoin honey and very little brood, as the queens cease laying early.

But the old stocks will have a vigorous young queen in each, trying her powers to produce a lusty population to outlive the

winter, and there will be patches of brood as large as one's hand on seven of the nine combs. So that the owner who congratulates himself that he is taking up a 35-lb. stock will find that about one-third of the contents is brood and pollen.

When asked for advice I usually counsel that the casts should be kept for stock and fed liberally, using a whisky bottle stuck upside down through the hole on the top of hive. Then the straw hackle will keep everything snug. The swarms should be "taken up," together with such of the old stocks whose skeps show signs of decay.

The skeppist has had a trying season. Very little of the looked-for addition to his income will be forthcoming this year from the few skeps kept in the garden.

Since the middle of June little honey has been stored. The bees have not attempted to work in the straw "caps" placed on to catch a heavy flow. Instead, they have swarmed and swarmed until bees are all along the paths in skeps, boxes, buckets and receptacles of all kinds.

Not many of the skeps I have lifted recently are heavy enough to stand, and the cottager is unable to grasp the principles of feeding up for winter. Rather, he relies on the economy of the skep stock to pull itself through. Stocks in large skeps or boxes possess the most stores.

One evening recently, after a stormy day when the wind had died down, and a clear sky foretold a dry night, I left the apiary and journeyed over the hill to drive some bees.

They were found in an old garden under the wall, each skep on its leg and weighed down with an earthenware pan. The tapping of the upturned skeps from above the road soon brought an interested audience along the opposite wall. First, a group of school children, a labourer and his wife, then some folk from near-by cottages, the bread-roundsman smoking tentatively, and the vicar, who was not a beekeeper himself.

The bees ran aloft merrily, and by 7.40 p.m. three lots had been dealt with and the skeps carried indoors.

While the bees settled there was time for a walk down the crooked village street to a near-by apiarist, while the sun lit up with a yellow glow the cluster of cottagers round about the church, with its Norman tower of quaint architecture. I was directed to a bee tree, which is the pride of the village in that it never fails to supply as many May swarms as the cottagers need. May it continue to flourish.

A. H. Bowen.

August 26, 1922.

North Cheshire Chat.

One can sum up the honey season this year in one word—disappointing. A late start, but a glorious one, in May, gave us a promise of a bumper honey harvest; but alas! the latter part of June, the whole of July, August, and the first few days of this month cold and wet, so that, although we had the bees, we got no honey, because there was none to gather; or, at least, not enough to go into surplus chambers. I never remember such a profusion of wild white clover bloom, or the blossoming period to extend so long, but all for "nowt" as far as the bees were concerned. I think we have had about three days on which there was a flow from the clover the whole of the summer. Many flowers, fortunately, seem to be able to secrete nectar at a lower temperature than clover, notably blackberries, or, as our friends north of the Tweed prefer to call them, brambles. White clover seems to want a night temperature well over 60 degrees Fah., and a day temperature well over 70 degrees Fah., with not too strong sunshine to yield of its best. These conditions obtained, as before mentioned, about thrice this summer.

An examination of the brood chambers reveals plenty of bees, and rather more brood than normal—owing, probably, to the feeding of syrup—and very little stores. Last week, the finest since May, the bees gathered a little stores, and would still, if the weather had held good, gathered more, but it has broken again. Feeding is the order of the day. Thick syrup, given warm, and as fast as they will take it.

Farmers are looking glum with the bulk of the harvest to gather, and the weather unsuitable. Much of the corn in which young clover has been sown will take a lot of seasoning, as the damp summer has caused the clover to grow rank and strong. Should next year be a favourable one, the clover fields are sure, and there are rather more acres thereof hereabouts, too. Thus "hope springs eternal" in the beekeeper's breast, and, although 1922 gives a deficit balance-sheet, he hopes to make it up in 1923, and a good bit over.—D. J. Hemming, Appleton, Warrington, September 15, 1922.

Middlesex Bee-keepers' Association

Honey Show at Brentford.

A very successful show was held on Saturday, September 2, at the Wesleyan School Hall, Clifden Road, Brentford, where, despite the bad season, a large amount of very high grade honey was staged.

Thanks to the able manner in which Mr. R. R. Babbage carried out the organisation of the display, everything went without a hitch, all exhibits being staged in ample time for judging.

A very noticeable exhibit was a trophy put up by Mr. Babbage. This was very artistically arranged and attracted much attention. Another feature was the class for shallow frames, some really good examples being staged. Wax also was well contested. The run honey classes attracted a large entry, and it was difficult to discriminate, the quality being uniformly high. The class for semi-combs had only one entry, but this was well filled and capped.

One side of the hall was occupied by a very good display of bee appliances staged by Mr. R. Lee, of Uxbridge. This portion of the show attracted a large amount of atten-

tion, a considerable crowd constantly examining the exhibits.

At 5.30 a lecture on bee-keeping for allotment holders was given by Mr. J. Herrod-Hempsall, F.E.S. This occupied an hour and a quarter. So ably did the lecturer handle his subject that surprise was expressed at the time having passed so quickly. The large audience were deeply interested, and many questions were put and ably answered.

Altogether Mr. R. R. Babbage, who arranged and managed the whole show, is to be congratulated on a very interesting and successful exhibition.

The following is the list of awards. Judge, Mr. J. Herrod-Hempsall, F.E.S.

Class 62.—Display (one entry): 1st, R. R Babbage, Brentford.

Class 63.—Three sections (11 entries): 1st, H. S. Park, Stanmore; 2nd, W. J. Cooper, East Molesey; h.c., J. G. Bale, Golders Green.

Class 64—Three jars of light extracted honey (eight entries): 1st, H. G. Park, Stanmore; 2nd, J. G. Bale, Golders Green; h.c., W. J. Tyrrell, Staines.

Class 65.—Three jars of medium extracted honey (seven entries): 1st, R. R Babbage, Brentford; 2nd, J. G. Bale, Golders Green.

Class 66.—Three jars of dark extracted honey (four entries): 1st, R. R. Babbage, Brentford; 2nd, Mrs. Hodson, Enfield.

Class 67.—Three jars of granulated honey (five entries): 1st, W. J. Wilson, Golders Green; 2nd, W. J. Cooper, East Molesey; h.c., J. G. Bale, Golders Green.

Class 68.—One shallow comb for extracting (four entries): 1st, R. R. Babbage, Brentford; 2nd, J. G. Bale, Golders Green.

Class 69.—Aluminium semi-comb (one entry): 1st, J. G. Bale, Golders Green.

Class 70.—1 lb. of Wax (six entries): 1st, R. R Babbage, Brentford; 2nd, Mrs Middleton, Boreham Wood; h.c., W. J. Wilson, Golders Green.

Class 71.—Exhibit of interest, etc. (three entries): 1st W. J. Tyrrell, Staines; 2nd, R. R. Babbage, Brentford.

Class 72.—Gift jar (11 entries): 1st, W. J. Tyrrell, Staines; 2nd, C. Robinson, Grateley; h.c., W. Lonnon, Ixworth.

Class 73.—Gift section (eight entries): 1st, W. J. Cooper, East Molesey; 2nd, J. G. Bale, Golders Green; h.c., A. Emerson, Brentford.

Class 74.—Members' class, three jars, any colour (nine entries): 1st, W. J. Tyrrell, Staines; 2nd, A. Emerson, Brentford; h.c., R. R. Babbage, Brentford.

Silver Medal of the B.B.K.A. for highest points.—R. R. Babbage

Goods to the value of 10s. 6d. from Mr. R. Lee for second highest points.—J. G. Bale.

G. J. FLASHMAN, Hon. Secretary.

Peterborough, Oundle and District Bee-keepers' Association.

It was a happy thought when one of the Orphan Fund Committee of the National Union of Railwaymen suggested to his colleagues that the above Association be invited to join them in their efforts to raise funds to swell the income of their "Orphan Branch" by a flower and vegetable show, held at the Peterborough Co-operative Hall, Park Road, on Saturday, September 2.

Before dealing directly with the "honey display," the writer cannot help but refer to the excellent show of flowers and vegetables, the greater portion of which were grown by the railwaymen of Peterborough. The exhibits were magnificent. Judges in all classes had difficulty in awarding the prizes, the exhibits being so highly competitive.

In addition, there were classes for home-made bread, cake, table decoration, etc., all of which were well supported. Guessing competitions formed an amusing side-line, and included judging the weight of cakes, marrow, etc., and the age of a pullet (who looked very uncomfortable perched in a basket of small dimensions). Her ladyship showed considerable embarrassment as each competitor ventured to name the date of her birth. All of the exhibits were sold at the conclusion of the show, for the benefit of the Orphan Fund, as were also a quantity of commodities included in the show but "not for competition."

Now for the honey exhibits. Suffice to say that everybody concerned was thoroughly satisfied, though the "open class" was badly patronised, in spite of the substantial prizes offered.

There were, considering the season, some excellent samples of honey, and though only a few members had shallow combs fit for the show bench, there were some really good examples of the bees' wonderful work.

The prizes were awarded as under:—

(A).—Six 1-lb. Bottles of Extracted Light Honey (14 entries).—1, P. Cunnington, Oundle; 2, Rev. L. S. Clark, Polebrook; 3, E. Hodson, Huntingdon.

(B).—Six 1-lb. Bottles of Extracted Dark Honey (4 entries).—1, A. C. Peach, Peterboro'; 2, Capt. A. J. Constable, Peterborough; 3, H. C. Lilley, Peterboro'.

(C).—Six 1-lb. Bottles of Granulated Honey (4 entries).—1, F. Clarke, Oundle; 2, E. Mowbray, Oundle; 3, H. C. Lilley, Peterboro'.

(D).—Six 1-lb. Sections (glazed) (4 entries).—1, P. Cunnington, Oundle; 2, H. C. Lilley, Peterboro'; 3, E. Warren, Huntingdon.

(E).—One Shallow Frame (8 entries).—1, E. Plowman, Peterboro'; 2, G. H. Seamer, Peterboro'; 3, G. Plowman, Peterboro'.

(F).—Open Class.—12 1-lb. Bottles of Extracted Light Honey (6 entries).—1, E. Hodson, Huntingdon; 2, G. Plowman, Peterboro'; 3, Wills & Co., Isleham.

(G).—Gift Class.—One Bottle Extracted Honey.—1, H. F. Swann, Northampton; 2, E. Hodson, Huntingdon; 3, Major J. H. Hadfield, Alford. (28 entries.)

Considerable interest was evinced in the exhibits, and in the evening Mr. G. Plowman, Capt. A. J. Constable, and the hon. secretary explained a number of points of interest to numerous inquiries.

The great attraction arranged by Mr. G. Plowman, in the shape of a draw for a shallow frame, in 3d. tickets, brought £4 10s. to the funds, and the sale of the "gift" honey another £3 10s., so that "honey brought money"—£8 in all—to the noble cause.

The officers in connection with the honey display were:—Stewards: Mr. G. Plowman and the hon. secretary; judges' steward, Mr. H. Landin.

The Committee were fortunate in securing the services of Mr. J. Pearman, Derby (an old railwayman), himself a winner of over 2,000 prizes, including over 600 firsts, numerous gold medals, and the holder of the trophy for 17 years out of 18, as judge.

Mr. Pearman gave great satisfaction in

his difficult task, and spared no pains to see that merit alone secured prizes.

Thanks are due to the donors of special prizes. Mr. W. Stuart Thompson (£1 1s. for champion prize). Mr. G. Plowman (W.B.C. hive). Messrs. Andrews and Co. (bee appliances, value 15s.). Capt. A. J. Constable ("Welwyn" smoker), and the "Apis Club" for a bronze medal.—G. H. Seamer, hon. secretary, "Grace Dieu," Waterloo Road, Peterborough.

Supering with Standard Combs.

[10691] In the Rev. E. H. Oldham's letter, re "Visit to the Violet Farm," (*B.B.J.*, August 24), he says: "Mr. Kettle is strong in his advocacy of supering with brood frames in place of shallows, and the reasons he gave me have converted me to his point of view." I am sorry he does not give the reasons, as I am sure many bee-keepers would like to know. Perhaps Mr. Kettle will tell us in his next letter. I understand shallow frames are better, as the enlargement of the hive is more gradual, drone cells can be used, the larger cells facilitate extraction of the honey, and also take less time and wax to cap over; the shallow super would only be about 25 lb. to carry, as against 40 lb. If the larger frames of comb were wanted for the brood chamber they would, of course, be lost for supering, and others would have to be drawn out.

Egerton Allcock.

Bee Shows to Come.

September 16 to 22.—British Bee-keepers' Association Annual Show at Grocers' Exhibition, Royal Agricultural Hall, Islington, London.—Schedules from Hon. Secretary, B.B.K.A., 23, Bedford Street, Strand, London, W.C.2. **Entries closed.**

September 28, 29, 30.—Kent County and Western Divisional Show at the Crystal Palace. Open Classes to United Kingdom (12 classes), Honey, Wax, Mead, Novelty, Scientific.—Schedules from Hon. Show Secretaries, W. E. Clifford, Southlands Road, or E. R. Seadon, Stanley Road, Bromley, Kent.

October 4 and 5.—The Society of the Four Northern Counties limited to Cumberland, Durham, Northumberland, Westmorland, Congress and Fruit Show, also Bees and 15 Classes for Honey, to be held in the Market Hall, Kendal.—Schedule for Honey Section from G. Chatham, 18, Stramongate, Kendal. **Entries close September 27.**

October 12, at Ongar, in connection with the Ongar and District Agricultural Association.—Extracted and Comb Honey. Open to Essex.—Schedules from G. A. Taylor, Hon. Sec., Ongar and District Bee-keepers' Association, Ashcroft, Ongar.

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SMALL HOUSE, old garden, large outbuildings, about 6 acres grass land, chalk subsoil (building value £420 per acre); London, 17 miles; station, 7 minutes; freehold £2,350, or house, half acre, £1,100.—B. R., 21, de Vere Gardens, Kensington. j.70

FOR SALE, two strong Stocks Hybrid Bees, 10 standard frames, £2 each; box 5s. extra, returnable. PURT, 50, Bootham Square, York. j.50

IMPORTED Carniolan Queens, 8s., September.—B. WOODLEY, Thorne, near Doncaster. j.51

EXTRACTOR, Root 4-frame, hand power, automatic, reversible, 12-in. baskets, ball bearings, takes 8 shallow frames or 4 deep, any size to Langstroth, beautiful machine for commercial bee-keeper, as new, cheap for quick sale, £20.—BLACKBOURN, Wootton, Canterbury. j.52

URGENT. — Compulsory Disposal Complete Apiary: 4 Stocks, Italians, in W.B.C. hives, 1, 16 x 10 frames, 4 Racks Sections, 6 Supers Shallows, 7 Lifts, 3 Excluders, 3 Clearers, Geared Extractor, 3 Grad. Feeders, 2 Rapid, 260 Metal Ends, Veils, Smoker, 7-frame Nucleus Hive, 3 Hives now on heather, £23 the lot.—29, Balfour Road, Urmston, Manchester. j.53

AUTUMN HOLIDAYS.—Private Apartments or Board-Residence. Special terms for long periods.—MRS. T. BETTS, 60, West Parade, Rhyl. j.54

FOR SALE, surplus young fertile Queens, Italian 5s., Hybrid 3s. 6d.—Apply, BEE EXPERT, Preston Hall, Aylesford, Kent. j.55

OVERSTOCKED.—Six Stocks healthy Bees, two 8-frame, four 10-frame, £12 the lot.—MUSSON, Weyhill, Hants. j.57

WANTED, English Honey. Send lowest price.—Box 91, B.B.J. Office, 23, Bedford Street, Strand, London, W.C.2. r.j.67

THE World's Famous Raspberry, Lloyd George, perpetual fruiting, 30s., 50s., 60s., and 70s. per 100.—J. J. KETTLE, The Violet Farm, Corfe Mullen, Wimborne, Dorset. h.71

HAVING retired from exhibiting, my splendid Trophy Stand, second to none, for Sale; price and particulars, with photo, 8d.; also Observatory Hive, stamp.—PEARMAN, Longford Street, Derby. r.j.29

GOOD quality Rasp Canes, delivery October, 7s. 9d. per 100, carriage paid.—HUNT, Bank Street, Somercotes, Derbys. a.j.43

FINEST ENGLISH HONEY, quality guaranteed, in 28-lb. tins, 1s. 3d. per lb.; tins free; f.o.r.—HARVEY, Apiarist, Andover. r.h.76

SELL.—Two small powerful Acetylene Brass Head Lamps, with separate generator, suitable light car or cycle car, £3 the set; carriage forward.—HERROD-HEMPSALL, Old Bedford Road, Luton, Beds. c.77

BEESWAX, pure, 5 cwts., packed in ½-cwt. bags, £8 16s. per cwt., f.o.r. London.—Box 89, B.B.J. Office, 23, Bedford Street, Strand, W.C.2. j.9

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CHOICE fertile young Black or Hybrid Queens from specially selected strains, 5s. each; Italians, 6s.—WITHYCOMBE, Docks, Bridgwater. j.56

ITALIAN QUEENS by Return of Post. Tested, 9s. 6d.; Untested, 7s. 6d.—Pearson & Gale, Marlborough.

HYBRID AND BLACK QUEENS, 1922, vigorous, 3s. each, post paid.—HARVEY, Apiarist, Andover. j.15

HONEY FOR FEEDING, in 60-lb. tins, 30s.; free on rail.—HARVEY, Apiarist Andover. j.68

ITALIAN QUEENS, finest strain obtainable, 6s., post paid.—HARVEY, Apiarist, Andover. j.69

THE WISE BEE-KEEPER looks for quality. The South Hampshire Apiaries breed only from the very best strains. Result: Quality and satisfaction. Beginners' Outfits from £5.—All communications, H. E. NEWTON, New Milton, Hants.

"FAKENHAM QUEENS," writes L. K., 21/8/22, "have done exceptionally well this season. Hope to give you order for 20 next spring." Could anything be more convincing of queen value in a difficult season when most bee-keepers have got poor returns or none at all from their hives worth noting.—ATKINSON. r.j.34

FEW imported Italian Queens for disposal, 6s. Will my customers accept apology for keeping them waiting? There will be enough to go round and to spare; weather is bad in Italy.—W. RENSLEY, The Luton Apiary, Queen's Road, Chatham. j.59

FEW ½ lb. Honey Bottles, 25s. per gross.—HOWARTH, Weymouth House, Purrett Road, London, S.E.18. r.j.23

BUYERS OF FAKENHAM QUEENS return again and again—not for nothing. The choicest examples of true pure Italian Queens are being broadcasted throughout the United Kingdom this season solely because bee-keepers will have them. Recommendation orders are more numerous than ever. One or other of your fellow bee-keepers is almost sure to run a Fakenham queen, or many. They'll gladly tell you why. A low price for sterling value, 7s. each.—ATKINSON, Fakenham. r.j.32

I'VE GOT SOME fine pure Italian Queens for British bee-keepers. Try me. If you don't like them, return first post and have your money back, plus postage, by next post.—ATKINSON, Fakenham. r.j.33

HONEY FOR BEE FEEDING.—Australian, new, 60-lb. tin, 35s.; West Indian, new, 56 lbs. 38s. 6d.; Californian, old crop, 60 lbs. 30s.; reduction quantities; samples on application.—LONDON TRADING AGENCY, 32, St. Mary Axe, London, E.C.3. r.j.47

AGAIN.—W. B. writes, 9/8/22: "Please forward another. Your queen received before has done exceptionally well." Atkinson's, sure. Them's it! r.j.35

TAYLOR'S WHITE SOFT CANDY.

Manufactured from guaranteed pure White Cane Sugar.

1/- per lb., post extra,

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7lb. tin, 8/9, post 1/6; 14lb. tin, 16/6 carr. ford.; 28lb. tin, 32/6 carr. ford.

E. H. TAYLOR, Ltd., Beehive Works, WELWYN, HERTS.

SURPLUS JULY-REARED QUEENS. — Carniolan-Italian and Hybrid-Italian, 6s. each; pure Carniolan, 7s. 6d.; English Hybrids, 5s.; by return.—CLARIDGE, Copford, near Colchester. j.58

HEALTHY DRIVEN BEES, with fertile Queen, 7s. 6d. per lot, carriage paid; boxes returnable; cash with order.—PULLEN, Ramsbury, Hungerford. j.60

STOCKS, 10s. 6d. per frame; Skeps, 63s.—PRYOR, Breachwood Green, Welwyn. j.61

PACKAGE BEES. — Ideal for re-queening; strengthening weak stocks; hived on combs make grand spring colonies; good lots, 12s. 6d.; specials, 15s.; crates returnable.—BOWEN. j.62

MAGNIFICENT VALUE.—Slightly soiled Tins (perfect inside), handles, bolted lids, 7 lbs., 6s. 6d.; 14 lbs., 10s.; 28 lbs., 17s. dozen, forward; boxes at cost.—BOWEN. j.63

EXCELLENT BOTTLES, all sizes. Send for quotations.—BOWEN. j.64

INCOMPARABLE CANDY, supreme quality. 7 lbs., 7s. 6d.; 10 lbs., 10s. 6d. Buy now.—BOWEN. j.65

FAMOUS COTSWOLD QUEENS ensure ample bees for wintering and good honey crops; re-queen now; 8s.—BOWEN, Coronation Road, Cheltenham. j.66

BEAR IN MIND, please, when you receive a Fakenham Queen she is at the outside but six weeks old from her cradle; not merely a vague "1922 queen," but actually a vigorous youngster, ready to take up the lead of the biggest or smallest colony you've got awaiting her. Most are just past the test stage—four to five weeks old. No stale surplus nor oddments are carried and know as well as you you don't want that sort.—ATKINSON. r.j.36

WRITES H., 4/9/22: "Your Queens are in strong demand here. I like them, too." They all do. Why not, at 7s. each, too, and beauties! Listen to the next, and not least. r.j.37

"YOUR EFFORTS have certainly succeeded, and the Queens you are producing are all you describe them to be. I am sending you the order that I usually send to Italy this time of year. Please send me 12 queens at your earliest for re-queening. The six I had during the past two weeks are beauties. One, however, disappeared after introduction, while all of the others were laying heavily on examination at the usual period after introduction. One of the first queens you sent had four combs filled with eggs and brood in a week. Few queens are purchased with such vitality. I congratulate you upon your success in thus securing a system of mating that maintains vitality and gives such satisfaction—more than I have ever obtained in my 40 odd years as a bee-keeper. I enclose my cheque."—W. R., September 5, 1922.—Them are ATKINSON'S, Fakenham, and none other. r.j.38

The Bee-Keepers' Calendar.

SEPT.—OCT., 1922.

September

28 Thursday. "So smells the Breath about the hives,
When well the work of hony thrives;
And all the busie Factours come
Laden with wax and hony home."
Herrick, "To Anne Soame."

29 Friday. "For some preside
O'er getting of the food, and duty-bound
Are busy in the fields."—*Virgil, Georgics, Book IV.*

30 Saturday. "Here their delicious task the fervent bees,
In swarming millions, tend."—*Thomson, "Spring."*

October

1 Sunday. "There's a whisper down the field where the year has shot her yield,
And the ricks stand grey to the sun,
Singing: 'Over then, come over, for the bee has quit the clover,
And your English summer's done.'"
Kipling, "The Long Trail."

2 Monday. "He will watch from dawn to gloom
The lake-reflected sun illume,
The yellow bees in the ivy-bloom,
Nor heed nor see what things they be."
Shelley, "The Poet's Dream."

3 Tuesday. "The bees rejoicing o'er their summer toils,
Unnumbered buds and flowers' delicious spoils,
Sealed up with frugal care in massive waxen piles,
Are doomed by man, that tyrant o'er the weak,
The death to suffer, smoored wi' brimstone reek."
Burns, "The Brig of Ayr."

4 Wednesday. "No house of stone
Was built for me;
When the sun shines—
I am a bee."—*W. H. Davies, "The Elements."*

5 Thursday. "The Bee's Kiss, now!
Kiss me as if you entered gay
My heart at some noonday
A bud that dares not disallow
The claim, so all is rendered up,
And passively its shattered cup
Over your head to sleep I bow."
Browning, "Pippa Passes."

British Bee-Keepers' Association Conversazione.

The autumn conversazione was held at Pritchard's Restaurant, Oxford Street, on Thursday, September 21. The attendance was good, about 60 members and friends (the number increasing later as those engaged in business were able to attend) assembling at 3 p.m. to hear a lecture on "Comb Honey Production," by Mr. D. Wilson, of Belper. Mr. W. F. Reid took the chair, and Mr. Wilson gave an excellent lecture, which, with the discussion following, fully occupied the time until 4 o'clock, when an excellent tea was served. After a pleasant hour enjoying this and discussing various bee matters, Mr. Price gave a lecture on "The Preparation of Exhibits for the Show Bench," followed by a discussion. At 6 o'clock Mr. F. W. Watts gave a lecture on "The Production of Extracted Honey," which, with the discussion, was carried on till about 7 o'clock.

Mr. Lamb then took over the duties of Master of Ceremonies, which he was unfortunately obliged to relinquish after a short time, Mr. W. H. Simms very kindly taking his place and carrying out the duties in a very tactful manner. A pleasant hour was spent in listening to music, songs, and recitations, the company gradually dwindling away as "train times" for those coming from outside the town approached.

We hope to give at least the main points of the lectures in future issues. The discussions following were very animated, the lecturers all having a large number of questions to answer, some of which would have required a further half-hour's lecture to answer fully.

Mr. Tom Sleight's Bereavement.

We are sure all our readers will join with us in heartfelt sympathy for our well-known correspondent, Mr. Tom Sleight, in the great loss he has recently sustained by the tragic death of his two sons, Charles and Leonard.

No doubt the majority of our readers would see the account in the daily papers how these young men met their death through being gassed while sinking a well at Blean, near Canterbury, and the heroic efforts made to rescue them. We were not aware of the relationship until Mr. Sleight paid us a visit last Monday morning on his way home from Kent. Charles, aged 25, was married, and leaves a widow and little boy. Leonard, aged 18, was working for his brother and partner.

Jottings from Huntingdonshire

Four fine days in succesion, with warm nights! This should not sound like news worth recording, but it is. The bees have had such a good time that they have—many of them—made further feeding unnecessary. The strongest stocks have stored fifteen pounds of honey in the time, gathered from flowering mustard, and even stocks which were being fed up have increased their store by 10 to 14 lbs., and this within a week of Michaelmas. Hardly a bee-keeper will fail to have noticed the amazing speed at which bees are working. I do hope that cold draught from the polar regions which the meteorologists tell us is working South, will mistake its way and go rushing down the Atlantic towards the equator before it blows over this isle.

Music is a wonderful thing, it soothes and charms, it enspirits and uplifts, and the music of the bees awing and happy in foraging is a delight; and, no doubt, if bee-keepers are conscious of savagery within their breasts, they will not be averse to being soothed by melody and harmony. There are times, however, when we would that the enchantment were postponed for a time lest it strike an unsympathetic note in the bee-keepers' breasts and produce discords. Such a time, I think, is when bee-keepers gather to hear some speechifying on the different branches of apiculture. I found myself at the recent conversazione the other day; I went to learn. A programme of lectures was prepared, and a good one, too; but, like several others, I had to flee the room during the last lecture. It happens that many of us who come up from the country rely upon trains, and trains have a happy knack of starting from the station at the time specified on the time table. I could wish, therefore, that the musical items could be held over until all lectures had been delivered. Then those who had time to wait could enjoy them to the full without the unpleasant feeling that those taking part in the entertainment were robbing some of an opportunity of listening to a helpful and instructive lecture. I have no desire to discourage the organisers of these conversaziones; my wish rather is to ensure a full opportunity for instruction for those who are athirst for more knowledge of the craft.

Having given my fellow bee-keepers, who sit in high places, a dig in the ribs, I will proceed to prod the ribs of our appliance

makers. Beedom is waiting for someone who will supply section woods at a reasonable price; who will make frame parts so that the sides will dovetail into the tops without trimming with pen-knives or needing a hammer of weight to send the parts home; who will see that the glass sold for glazing sections is correct size and square, not a cross between a true-square and an encipedal palmicated circle; who will not send out lace-edged glazing papers of such a width that where used leave a visible piece of glass about two and a quarter by two and a quarter; who will supply laced-paper gummed; who will always stock hives to which the Swiss entrances can be attached; who will make bottle feeders with a regulating top which will function according to the number of holes; who will produce a solar extractor at a guinea; who will smooth off the rough edges of the die-cut in queen excluders; who will make weather coverings for skeps, and who will produce wooden separators for section racks which won't buckle, and who will—— but enough for the time being. I've had catalogues from Germany, and have seen some bee things made in that land, and I'm jealous for the appliance makers of my own country, so please take this dibbing of ribs in the right spirit.

Now a question for the judges. Is sugar syrup plus light clover honey well mixed, fed rapidly to the bees, and after extracted and bottled, water white honey?

Having managed with concentration which would do credit to Pelmanism to distinguish a bee's brood-nest from a wasp's on a dark night, I am anxious to be able to know how to distinguish various honies by flavour alone. What a lot of ink flows from one's pen when the honey fly has inoculated us with an intense love of her person!—E. F. Hemming, Steeple Gidding.

Week-End Bee-Keeping.

By S. H. Smith, Cambridge.

(*Continued from p.* 461.)

May 31, the two beestocks earmarked for shipment were full of bees and brood, and had plenty of honey and pollen. They left the D.B. apiary that evening and arrived safe and sound at their destination. Their two section racks went on top of the other two already in position on No. 2 Hive. Six, fairly good, sealed sections were taken out of the rack next to the excluder from No. 2. One of these, still warm and deliciously flavoured, graced a glass dish on the teatable that afternoon, but it rapidly faded out of sight. Everything looked lovely, and it was easy to predict a grand honey year ahead of us.

June 10, 24 more sealed sections were removed and replaced by empties. No. 1 showed combs being filled and sealed so nicely that another brood chamber was added full of wired and waxed frames. Placed next to the excluder, the wax foundation would be quickly drawn out and D.B.'s store of combs would grow in numbers. But this was the last time any supering was done in that apiary in 1922.

June 17, after a week of cold winds and rains, hopes still were high. There were acres of blossoms in the fields and a few days of warm sunshine would send plenty of nectar into the hives. By July 1 all fears of the predicted drought had flown. The Royal Show week was spoiled by bad weather, but the excellent honey display was an education to the D.B.'s, and enthusiasm was still rife. Only by July 22 did we begin to figure on a sadly reduced honey crop.

By August 5 we guessed the game was up, but memories persisted of wonderful late takes in 1916 and 1918 in Cambs.

It was not all gloom. There were diversions. I had promised the twins to show them some time in June how the cuckoo lays its egg in the nest of the meadow pipit, following the admirable exposure of this performance in Edgar Chance's book, "The Cuckoo's Secret," published this year. In spite of rain and wind we were able to see the female cuckoo glide down, extract an egg, and leave its own in the pipit's nest.

Then one afternoon the D.B. family descended upon my apiary, bringing a tea basket full of good things. Rain drove us into the workshop, and old Satan introduced herself by digging her claws into the bare legs of the twins. I got a wigging for not looking after that poor cat better. Her coat of rusty black was coarse and staring, plainly indicating that a diet of milk was needed. Satan lapped up several saucers, then vanished. We had forgotten all about her when she hove in sight carrying in her mouth what looked like a large rat. It turned out to be a fine, fat kitten. She left it with us and disappeared again.

In ten minutes she was back with another. The twins were delighted, and Mr. and Mrs. D.B. exchanged excited whispers. I was only too thankful to note Satan nursing the kittens. This I took to be a sign there were no more. I had acted as godfather to Satan's offsprings before.

D.B. offered me ten shillings for the cat and kittens, but I repudiated any part or parcel in the ownership of such a disreputable animal, and referred him to the proprietor of the glass-houses some hundreds of yards away. Without a word, D.B. went out into the rain to find him.

When he returned he said he had given fifteen shillings for the outfit and offered to buy an old skep and a sack in which to carry it away. He offered me a half interest for 7s. 6d. in what he called a "colossal bargain," but I declined to invest one penny. When he stated further that I should have a half interest in one kitten, whether or no, I hastened to change the conversation.

Half an hour later the D.B.'s left for home, carrying Satan and family, snuggled up in an old flat-bottomed skep, which was slipped into a large sack.

A visit to the D.B. apiary August 19 showed plainly that any further hopes of a 1922 honey harvest were futile. No. 1 was

down to three brood chambers, with very little honey in the upper one. No. 2 had still two section racks, but contained not one sealed section. Then, August 25, the blow fell.

The twins had noticed the trouble first. I was hardly through the gate when they came running to tell me how the bees were crawling and going hoppety-hop! down the alighting board, to fall to the ground. Bees were scratching themselves, climbing up blades of grass, and making vain efforts to fly. Many seemed gorged and nearly bursting. Others gathered together in little bunches. Some, walking fast, made a bee line through the grass in an effort to leave the apiary. Those twins detailed all the usual symptoms and ended up by an appealing: "Good Mr. Week-End, please help our poor, dear bees!"

Thanks to the work of the Aberdeen investigators no time was wasted on conjectures. A microscopic examination told the tale in no time, and the mites became visible to the D.B.'s. They were horrified that wretched little mites should be able to invade the thoracic spiracles and cause so much damage to the bees. Where did the mites come from? A "cure" was surely obtainable? Alas! I could answer neither question. All we could do would be to attempt some more or less empirical treatments based on more or less guesswork. But something had to be done and quickly.

"Here's how I figure it D. B. It is only reasonable to suppose that the mites are carried into the hives on the bodies of the flying bees. It would be impossible for such feeble creatures, so poorly endowed as they are with locomotive powers, to invade a bee stock unless brought in. Very well—the flying bees must visit plants, flowers or places that harbour the mites."

(To be continued.)

A Timely Warning.

From practically all quarters, with a few exceptions in the South, come doleful reports of 1922 season from a bee-keeper's point of view. Here in North Derbyshire we had a wonderful spell of fine, sunny weather for the six or seven weeks during which the fruit blossom of all kinds, both wild and cultivated, was in full swing, and this continued up to the evening of Whit Wednesday, but during the night the weather "broke," and it has never been even decently "patched up" since. From that time, what honey has been gathered has been scarcely sufficient to meet daily requirements, and in many instances whatever of the fruit-blossom honey had been stored in supers has since been carried down in default of other supplies coming in.

Under these conditions, early feeding must be resorted to if stocks are to continue the production of brood during the next few weeks, as well as to place the bees in a position to face the rigours of the coming winter, or we shall certainly have to lament the loss of many stocks before the advent of another spring. To increase the risk of this possibility, there has been a phenomenal number of late swarms, some even in August; but surely a wise bee-keeper would return these to the parent hive, availing himself of the opportunity thus offered of replacing the old queen with a young one, providing, of course that the young queen secured a favourable opportunity for being successfully mated, a problem attended by much uncertainty and delay under the climatic conditions prevailing for some weeks past.

But in those cases where even July swarms were not returned but were kept as increase of stock, their chances of survival are exceedingly precarious unless liberally fed from the time they were hived, and this must be continued until a sufficiency to see them through till "candy time," which should not be deferred too long after January. We have all heard the adage, "Don't spoil the ship for a 'ha'porth' of tar," and I would appeal to all amateurs and beginners in bee-keeping, in whose especial interest this is written, "Don't lose a stock of bees for want of a pound, or even a dozen pounds, of sugar.

In conclusion, "Be prepared."—GEO. GRIFFIN, Parkside, Clay Cross, September 19, 1922.

Isle of Wight or Acarine Disease of Bees.

I have been trying for long to find a cure for this dreadful disease of adult bees. It is caused by a microscopic mite, which enters one of the foremost pair of spiracles or breathing holes in the thorax or chest of the bee. Fortunately, this is the only pair large enough to admit this disaster-bringing guest. It finds a home in the trachea or breathing tube, where it breeds until the trachea is filled with mites and their larvæ and eggs. The great muscles controlling the movements of the two pairs of wings and three pairs of legs are all contained in the thorax, and become partially asphyxiated, so that the bee cannot fly and becomes a "crawler." At the same time the mites feed on the fluids of the bee.

These mites belong to the sub-class Arachnida, and have four pairs of legs. They are placed in a class above the insects, which have only three pairs when mature, and to which the bee belongs. They were discovered by Dr. Rennie and his team of scientists in Aberdeen, and named by him *Tarsonemus woodi*. This disease is completely different from the old foul brood diseases of bees, which are caused by bacilli, exceedingly small single-celled fungoid plants.

To kill the mite without killing the host, the bee, is to cure the disease. But a temperature of less than 118° F. (48° C.) kills the bees and leaves the mites livelier than

ever, and cold kills the bees and leaves the pest still alive.

Sulphur is largely used by physicians and gardeners to kill Acari, similar to this parasite. For instance, sulphur ointment for itch and mange. Flowers of sulphur and dissolved sulphur are used against red spider, which is really a mite. So I have tried many forms of this valuable drug.

Ammonium sulphide seems useful. 30 drops or half a teaspoonful (increasing the dose every three or four days) dropped on brown paper and shoved in at the entrance after the bees are all in at night and closing the hive with a damp cloth seems to do good, but individual bees in a test tube, asphyxiated by the fumes, had sometimes mites still living.

Barium sulphide acted on by diluted hydrochloric acid had somewhat similar results.

Collosol sulphur (Crookes), a very finely divided liquid preparation, fed to bees, seems to reach the blood stream and eventually to poison and kill the mites in about 20 days. Dr. Rennie gave me some assistance with this, and found the bees almost free of living Acari.

I am very anxious that bee-keepers should try this remedy extensively. Now is the time, when so many stocks have to be fed up for winter, to try either taking away all their winter stores except pollen, and feeding thick sugar syrup diluted with an equal quantity of Collosol sulphur, or some less drastic use of this drug.

The hive of bees I have been working with was very badly infected. I have not found one single bee without the trachea full or almost full of mites. As Dr. Rennie points out, such advanced infection has normally many dead mites, but I could find no living ones after 25 days' treatment with Collosol sulphur, although I have tried to stimulate them on warm plates and by the heat of the sun from above and below.

If Collosol is too expensive, I suggest also precipitated sulphur, up to two ounces per gallon of syrup.

I do not contend that my experiments are final, only that they seem worthy of extended trial.

To dissect the bee for mites, I pull off the head, then put a thick dissecting needle through the neck hole, and push the body right up to the wooden handle. With a wet razor I now cut off a thin slice from the back, leaving the wings still on the needle. Then another parallel slice by razor or fine scissors gives first one pair of wings and then the other with that part of the chitinous skin (which is really the insect's skeleton) forward to the neck. Each should contain one trachea which runs forward from the spiracle, situated a very little in front of and below the first wing. This gives comparatively little muscle, of which the thorax is almost full. All that clings to this may be moistened and scraped out, which I think is the Aberdeen way, or the muscle may be gently dissected out, and the trachea sought against the wall of the ex-skeleton. If this be moistened with a drop of water it becomes more transparent, the mites are visible, and this does not require a powerful microscope. A one-inch objective is ample. If the trachea is cut into four pieces mites will be seen emerging.

JOHN W. MOIR,
Hon. Librarian,
Scottish Bee-keepers' Association.

[It is too late in the season, even in the south of the country, to follow Mr. Moir's suggestion of taking away all stores and feeding syrup. Bees are not now able to do much wax secretion, the weather is too cold, and consequently the newly fed stores would not be likely to be sealed over. An appreciable quantity of wax is needed for this purpose alone. Candy might be medicated with the sulphur.—EDS.]

A Return to Apiculture.

By HERBERT MACE,
Author of "A Book About the Bee."

Literature devoted to bees and bee-keeping teems with the experiences of the "New Beginner," as he so often styles himself when too modest to append his natal name. It is natural enough. Having adventured into an arena hitherto savouring of dark mystery and fearsome peril, he feels such a thrill of achievement that he is inspired to tell the world of his wonderful discoveries and the joys of his new conquest.

I do not remember, however, having ever seen an account by one who, having once explored the *terra apia* (I am not very great at Latin declension, but this will convey my meaning) and left it, telling the story of a second journey into that delectable country. This, again, is easily explained. Of those who first travel thither, some receive such painful discouragement that they never again dare set foot within stingshot of a hive, while most of the others, having once invaded the territory, can never be induced to leave it. My story of a second venture may, therefore, have something of novelty to commend it, for although it is well nigh impossible to "recapture the first fine careless rapture," there is always a great joy in meeting again friends from whom one has, by force of circumstances, been long parted.

It seems to be necessary to provide some excuse for having abandoned bee-keeping, even for a time. What better than the war and its aftermath? In '15 I had a flourishing little apiary, newly established after a long, tiring fight with "Isle of Wight" disease, but before the next season was over I found myself three thousand miles away, and it was not till the spring of '19 that I returned, more or less wrecked by tropical disease. My family had been obliged to leave the little country holding, the bees had been sold, and nothing remained but four empty hives, the honey extractor, and some odds and ends of appliances. I had certainly contemplated starting again immediately, but the difficulties proved insuperable. In the first place, the new house had no garden beyond

a narrow strip between the house and the road on two sides, scarcely more than ten feet wide, and no land outside was obtainable. The following spring I certainly secured some land, five rods to be exact, but I found bees had "gone up," and neither stock nor swarm could be obtained for less than about fifty shillings to three pounds. Much as I loved them, therefore, I felt that I had no right to risk any of my slender post-war resources in what I knew, from the prevalence of disease in the neighbourhood, was a pretty hazardous enterprise. So it came about that I remained beeless during 1920 and 1921, though in the latter year I got so far as the promise of the "next swarm" from a neighbour, to whom I had given some advice on swarm prevention and control. Perhaps my advice was too good, for there was no "next swarm," and another season—a bumper one, as it proved—passed by.

Even on the most enthusiastic, a certain apathy seems to descend when things continually go contrary, and I had, I believe, practically given up the idea of keeping bees again, when the present swarming season opened. As if to reproach me for my faithlessness, the bees then took it into their heads to come to me, much as a long-wooed maiden will, when her lover drops his attentions in despair, awake to the fact that she wants him, after all, and fling herself in his way.

It was a Sunday afternoon (of course, Sunday), and I sat in a deck chair outside, half dozing in the heat, when some voices in the lane outside came to me. Children on the way to Sunday School.

"What are all those flies doing?" piped one tiny treble.

"They're not flies, silly, they're a swarm o' bees," said another voice. "Come away or they'll sting yer."

(*To be continued.*)

Altrincham Show.

This, the largest one-day show in the United Kingdom, was held on Wednesday, September 20. The number of entries beat all its own records and even exceeded the number for the Royal Show.

The honey section was well filled, and the quality of the extracted honey very good; the comb honey was not of such good quality owing to the poor season.

The observatory hives were a very strong class, the first prize winner was made by the students at the Bowdon C. of E. School, and is a great credit to them and their instructor, Mr. A. J. Blakeman.

Mr. Franklin lectured in the bee tent during the afternoon to a large and interested audience. After the lecture a gentleman came into the tent for a cure for rheumatism; a few bees were placed on his arms and made to sting him, greatly to the amusement of the onlookers. The "patient" went away highly satisfied

Mr. E. W. Franklin and Mr. Percy Kirkness acted as judges for the honey, etc., and made the following awards:—

Observatory Hive with Bees and Queen (5 entries).—1, Bowdon Schools; 2, Sheppard & Lee, Altrincham; 3, Fk. Newport, Tattenhall.

12 Sections of Comb Honey (1 entry).—2, A. J. Blakeman, Bowdon.

12 Jars Run or Extracted Honey (5 entries).—1, J. S. Leigh, Blackpool; 2, N. E. Broughton, Wilmslow; 3, Wm. Barlow, High Legh; r., J. Birkett, Rainhill; v.h.c., W. Armor, Chester.

Gift Class, one jar of Honey (16 entries).—1, J. Birkett; 2, W. Shuker, Hale; 3, T. Rowland, Chester; r., Fk. Newport.

Six Sections of Comb Honey (1 entry).—3, W. H. Booth, Chilford.

12 Jars of Run or Extracted Honey, light coloured (8 entries).—1, Fk. Newport; 2, N. E. Broughton; 3 T. Rowland; r., Wm. Barlow; v.h.c., J. Bosler, Sutton Weaver; h.c., Capt. Nevill, Bramhall.

12 Jars of Run or Extracted Honey, medium or dark coloured (4 entries).—1, Mrs. A. M. Johnston, Chester; 2, T. Rowland; 3, Capt. Nevill.

Two Shallow Frames of Comb Honey (1 entry).—1, W. B. Bennitt, Ashton-on-Mersey.

Not less than 1 lb. of Beeswax (2 entries).—1, Fk. Newport; 2, N. E. Broughton.

Six Jars of Run or Extracted Honey (6 entries).—1, Wm. Barlow; 2, T. Welch, Timperley; 3, B. O. Rayson, Brooklands; r., W. B. Bennitt.

Special Prizes.—Fk. Newport won the silver spoon offered by the C.B.K.A. for the best exhibit of light-coloured honey and the silver-plated spoon for the best exhibit of beeswax. Mrs. A. M. Johnston won the silver-plated spoon offered for the best exhibit of medium or dark-coloured honey

(*Communicated.*)

Honey Show at Preston.

The bee and honey tents at the Royal Lancashire Agricultural Show at Preston in the great Preston Guild week were well patronised by bee-keepers and others. It was, of course, much too late in the season for large sales of bee appliances, though the well-known Liverpool firm, Seeds & Bees, Ltd., of 22, Bolton Street, staged a large and very varied collection of hives, extractors and the hundred and one auxiliaries to successful and up-to-date bee-keeping.

Messrs. Burtt, of Gloucester, also showed "Easy to Work Hives Outfit." Mr. J. N. Bold, of Almond Green, West Derby, gave two lectures each day, one for novices in the morning and the other on more advanced lines in the afternoon. Both he and the steward, and the judge, Mr. F. H. Taylor, of Chorley, were in conference with bee-keepers constantly during the four days; and altogether a great deal of helpful advice was given, and there were many expressions of gratification at the success of that section of the show, despite the comparatively small number of entries in the honey class. Needless to say that with the delightful weather that favoured the whole of the week, and the enormous crowds of people that poured into Preston for the far-famed Guild, the crush in the honey tent often was rather oppressive, and it surely evidences close and persistent attention by the steward and his assistants that at the close of the Show, when they packed up the exhibits to return to the senders there was only one jar of honey missing, and no sections or jars had been broken or damaged in any way. This is surely a record for any of the large shows,

and it is hoped it will help to induce much more numerous entries for the Royal Lancashire Agricultural Show in 1923.

The Society always offers good prizes, and it is up to bee-keepers to see that none go begging, and that competition for them is keen. One hint is due to Lancashire bee-keepers: Why if they support their own classes well, and if they can show such fine quality honey as was shown this year, are they not more courageous and enter the same quality honey in the open classes? And where, oh where, is the heather honey that was gathered in such abundance in the autumn of 1921? Your reporter would also like to suggest that as one of the objects of the Show is the popularising of English honey on the market, bee-keepers should save of this year's honey for next year's Show, and make a much larger exhibit in the granulated class. Grocers and other retailers much prefer honey so, because it is nicer to handle; it is nothing like so messy on shop shelves, and there is hardly anything more tempting or appetising to the consumer than a jar of good, nicely-granulated honey.

The awards in the various classes were as follows :—

12 Sections 1922 Honey, open to the United Kingdom.—1st, G. Evans, Newport, Salop.

12 Jars 1922 Honey, open to the United Kingdom.—2nd, P. J. North, Cambridge; 3rd, Brs. Bateson, Frodsham.

12 Sections 1922 Honey, County Palatine.—2nd, Mrs. Rigby, Penwortham.

12 Jars 1922 Honey, County Palatine.—1st, A. Magson, Kirkham; 2nd, J. Abram, Southport; 3rd, J. Ward, Hesketh Bank.

12 Jars 1922 Medium Dark, open to the United Kingdom.—1st, Mrs. Rigby, Penwortham; 2nd, J. Ward, Hesketh Bank; 3rd, J. Birkett, Rainhill.

6 Jars Granulated Honey, open to the United Kingdom.—1st, G. Evans, Newport, Salop; 2nd, J. Ward, Hesketh Bank.

6 Jars Heather Blend Honey, open to the United Kingdom.—2nd, A. Cronshaw, Darwen.

The Lancashire Bee-keepers' Association Silver Medal was awarded to Mr. Magson, and the Bronze Medal to Mr. Abram.

In some classes the entries being few, and the quality of the exhibits not quite "tip-top," some of the prizes were withheld.—(*Communicated.*)

Middlesex Bee-Keepers' Association.

Our meeting at Golders Hill Park last Saturday was deterred by rain from being held in the open, but was held in a room kindly lent by the authorities adjoining the Apiary. An interesting lecture was given by Mr. Flashman (in the absence of Mr. W. Herrod-Hempsall) to a small but enthusiastic audience; two new members we hope will be gained as a result. Questions were asked and answered in quite animated style. Mr. Lamb took the chair and gave his experience with his bees, also presenting certificates for the preliminary examination to Mr. Baldwin and Mr. Wilson. A display of honey, shallow combs, sections, etc., and other interesting exhibits added to the pleasure of the afternoon. Mr. H. F. Cutler, Stoke Cottage, North Hayling, Havant, would like to get in touch with bee-keepers in the district. The meeting closed at 5.30. W. J. W.

Twickenham and Thames Valley Bee-Keepers' Association.

The annual honey show, held in conjunction with the Twickenham Horticultural Society's Exhibition, was held at the Town Hall, Twickenham, on September 13.

The number of exhibits in every class was greatly in advance of previous years, and considering the season, it was an extremely good show of honey.

Competition in most classes was very keen, particularly those for extracted and granulated honey.

The committee take this opportunity of thanking all who entered in classes 1 and 2. St. John's Hospital benefited to the extent of 18 lbs. of honey.

Mr. A. G. Gambrill judged, and made the following awards :—

Gift Classes (open) :—

Class 1. One section : Mrs. Scott, Brandesburton, nr. Hull.

Class 2. One jar extracted honey : Mr. C. Robinson, Grateley, Hants.

Members only :—

Class 3. Three jars extracted honey : 1. Mr. G. Patterson, Isleworth. 2. Mr. J. Curtis, Hampton Hill. 3. Mr. W. Ing, Hampton Court.

Class 4. Three sections : 1. Mr. W. Taylor, Richmond. 2. Mrs. Jackman, Richmond. 3. Mrs. Fox, Twickenham.

Class 5. Shallow frame : Mr. A. J. Tabor, Feltham.

Class 6. Wax : Mr. G. Patterson.

Class 7. Three jars granulated honey, Mr. W. Ing.

Class 8. Home-made hive appliance, Mr. C. D. Burnet, Twickenham.

Class 9. Best kept apiary. Mr. C. D. Burnet.

The prize in this class was the Apis Club Bronze Medal.

Mr. G. Patterson again won the Burnet Challenge Cup and B.B.K.A. Silver Medal, Mr. C. D. Burnet B.B.K.A. Bronze Medal, and Mr. W. Taylor Certificate of Merit.

These awards were for all-round display.

Messrs. Robert Lee, Ltd., of Uxbridge, staged an excellent exhibit of hives and appliances.

M. Byatt, Hon. Sec.

Dorset Bee-Keepers' Association.

A very successful honey show was held by the Blandford and Sturminster Newton District Branch of the Dorset Bee-keepers' Association, in connection with the Blandford Agricultural Show, on Wednesday, September 20. The Association offered prizes for honey in nine distinct classes, open only to its members, besides which there were three open classes, the prizes for which were given by the Blandford Agricultural Society. There were seventy-two entries in all.

The judge, Mr. J. Herrod-Hempsall, was particularly pleased with the exhibits in the class for light-coloured run honey. There were fifteen entries in this class, and the task of judging them was no easy one. After awarding a first and second prize and a

highly commended, the judge remarked that had there been enough cards a "commended" might have been given to each of the remaining exhibits!

There were also some excellent samples of heather honey, which brought their exhibitor, Mr. E. H. Garrett, of Broadstone, several first prizes. Mrs. Bond, of Blandford, is also to be congratulated on taking so many prizes.

During the afternoon Mr. Herrod-Hempsall gave a very interesting and instructive lecture and demonstration on bee-keeping. Tea was provided in the Masonic Hall for members of the local branch of the Association. It was hoped that after tea Mr. Herrod-Hempsall would have given another lecture of a more advanced nature, but unfortunately he was obliged to return to London by an early train; however, though there was no time for a lecture proper, he very kindly answered the many questions which were showered upon him during tea and afterwards.

It is believed that this is one of the largest, if not *the* largest, show of honey there has yet been in the county of Dorset.—M. PLOWMAN.

Cheshire Bee-Keepers' Association.

In connection with the Cheshire Agricultural Society, the annual show of the above Association was held on the Roodee, Chester, on August 30. The entries this year were not as numerous as usual, but it was surprising to find that so many exhibitors were again able to patronise this most attractive show. In most parts of our country the season has been almost a failure, and the few fortunate bee-keepers who obtained any surplus honey are those within reach of plentiful supplies of fruit bloom in May and the early clover in June. From about mid-June bees have done hardly more than keep their own larders going. On the whole, the exhibits were of a high standard, although in some of the classes we have seen better quality at this show. The day kept fine till late in the evening, and many bee-keepers who had not seen one another since the last show made the Honey Tent a "rendezvous" for their annual meet. Of course, they "talked bees" all day, and never seemed tired of their subject. One familiar figure was missed this year the late Canon T. J. Evans, of Knutsford, for 13 years chairman of the C.B.K.A.

Despite the poor season, the keenest interest in the craft was shown by old and new bee-keepers. All are looking forward to a better time next year, and wisely laying down the foundation for future work now, by replacing their old worn-out queens with young ones of the best strains obtainable. Queen transactions were numerous at the show.

Candidates for the Elementary Certificate of the B.B.K.A. were examined during the day.

E. Percy Hinde, Esq., of Liverpool, and E. W. Franklin, Esq., of Mouldsworth, Cheshire, again acted as judges, and their awards, which were as follows, gave general satisfaction :—

Best and most complete Frame Hive for general use, unpainted.—1, F. Newport, Tattenhall; 2, W. Emery, Winsford. Best Beginner's Outfit.—1, W. Emery; 2, F. Newport. Sections of Comb Honey gathered during 1922, approximate weight 12 lbs.—1, G. Evans, Newport. Twelve bottles of Run or Extracted Honey, gathered during 1922, approximate weight 12 lbs.—1, G. Evans; 2, W. Davies, Northop Hall; 3, J. Birkett, Rainhill; 4, A. V. Ward, Saughall. Observatory Hive with Bees and Queen.—1, F. Newport; 2, E. G. F. Dawson, Newton-by-Chester. Gift, 1 bottle of Run or Extracted Honey.—1, W. Shuker, Hale; 2, J. Birkett; 3, W. Lonnon, Ixworth, Suffolk. Six sections of Comb Honey, gathered during 1922, approximate weight 6 lbs.—1, J. C. Dutton, Wrexham; 2, T. Rowland, Aldford. Twelve bottles of Run or Extracted Light-coloured Honey, gathered during 1922, approximate weight 12 lbs.—1, F. Newport; 2, J. C. Dutton; 3, W. Davies. Twelve bottles of Run or Extracted Medium-coloured Honey, gathered during 1922, approximate weight 12 lbs.—1, Mrs. G. J. Johnston, Chester; 2, A. V. Ward. Twelve bottles of Run or Extracted Dark-coloured Honey, gathered during 1922, approximate weight 12 lbs.—1, J. C. Dutton. Exhibit of not less than 1 lb. of Wax, the produce of the exhibitor's apiary, extracted and cleaned by the exhibitor or his assistants.—1, T. Alun Jones, Halkyn; 2, F. Newport; 3, F. W. Fenn, Neston. Twelve bottles of Run or Extracted Honey, gathered during 1922, approximate weight 12 lbs. 1, W. Davies; 2, T. Rowland; 3, Wm. Armor. Six bottles of Run or Extracted Honey, gathered during 1922, approximate weight 6 lbs.—1, W. Armor; 2, Miss Williams Wynn, Wynnstay; 3, Miss E. Nuttall, Chester.

(*Communicated.*)

Northants Bee-Keepers' Association

The 39th annual show was held in conjunction with the Municipal Horticultural Society at Northampton on August 8 and 9.

A splendid show of honey was put up by the exhibiting members, upwards of five hundred pounds (500 lbs.) being staged. A special exhibit of 150 lbs. put up by Mr. H. F. Swann (hon. secretary) was very attractive, also the observation hive with bees enclosed was of the greatest interest to the public.

Demonstrations were given by Mr. H. F. Swann; good audiences were present at each demonstration. The advantages of bee-keeping were ably put by the demonstrator. Questions at the close were forthcoming, and satisfactorily answered. Great interest was manifested by the public; the handling of bees without any protection was a revelation to many.

The judges, Mr. Mason, of Mason & Hedley, Grafton Regis, and Mr. J. H. Willmott, Stanwick, made the awards to the satisfaction of all.

Class A.—Six Sections :—No entries.

Class B.—6 lbs. Light or Medium Extracted Honey in glass jars (19 entries) :—1st, Mr. A. Willmott, Higham Ferrers; 2nd, Mr. J. W. Shelton, Woollaston; 3rd, Mr. J. W. Snedker, Northampton.

Class C.—6 lbs. Dark Honey (4 entries) :—1st, Mr. A. Willmott; 2nd, Mr. A. C. Looker, Northampton; 3rd, Mr. E. W. Tarry, Little Brington.

Class D.—Three Shallow Cars :—No entries.

Class E.—3 lbs. Granulated Honey (2 entries) :—1st, Mr. Willmott; 3rd, Mr. E. W. Tarry.

Class F.—Six Sections (4 entries) :—1st, Mr. F. A. Bailey, Berrywood Farm; 2nd, Mr. W.

Jones, Hardingstone; 3rd, Mr. E. Dixon, Northampton.

Class G. 6 lbs. of Light or Medium Honey (16 entries): 1st, Mr. A. Willmott; 2nd, Mr. S. Watson, Rushden; 3rd, Mr. A. E. Beardsmore, Rushden.

Class G.G. 6 lbs. Dark Honey (2 entries): 1st, Mr. A. Willmott; 2nd, Mr. E. W. Tarry.

Wax. 1st, Mr. E. W. Tarry.

Class W. (open). 1 lb. Jar of Honey (21 entries): 1st, Mr. E. Hodson, Huntingdon; 2nd, Mr. S. Watson, Rushden; 3rd, Mr. A. E. Beardsmore, Rushden.

Cake Class (10 entries): 1st, Miss Kershaw, Northampton; 2nd, Mrs. H. E. Swann, Northampton; 3rd, Mrs. A. J. Swann, Northampton.

H. F. SWANN,
Hon. Secretary.

Hampshire Bee-Keepers' Association.

The annual general meeting of the above is to be held at the offices of the Gas Company, Ogle Road, Southampton, at 2.30 p.m., on Wednesday, October 4, when it is hoped that all members will make an effort to be present as most important business is down for consideration. Any bee-keeper requiring information as to membership of the Association is requested to write to Mr. E. H. Bellairs, Bransgore, Christchurch, Hants.

CORRESPONDENCE.

Prevention of Swarming.

[10692] I was interested to read Florence Wrench's letter in the issue of September 14, and am glad to know that my "Hints to Beginners" have been of some use to somebody. Reading between the lines I am of opinion that my scheme for the prevention, or retarding of swarming was put into practice rather too late. It would seem that Florence Wrench allowed her bees to get to the queen cell stage, and once they reach this point it is almost impossible to keep them in *for any time*, whatever you do. The secret to my mind is—never to let your bees get to the queen cell stage, or the swarming fever, if you do not want swarms. To attain this object I think my scheme as given in "Hints to Beginners" may be considered fairly effective. If Florence Wrench starts on these lines at the end of April or beginning of May I think she will have less trouble with swarming than she appears to have had this year. H. K SPRINGETT.

Wanted, a Queen Excluder.

[10693] Re 10680 and 10687, I was rather surprised to hear of a bee-keeper who could not get what he wanted and was very much amused at Mr. B. Wright's (I was just going to put "Be Wrong") suggestion of a hutch up which could also be worked with a strip of American cloth without any sawing and chiselling.

I wrote "Experientia Docet" that I could get him *exactly* what he wanted in multiples of ten for under two shillings (2s.) each, delivered, but perhaps Mr. Wright would consider this as a "sky high" price. If anybody wants any large excluders or anything else for their hobby I should be only too pleased to assist them. No doubt you would forward their letters to me and they may, if they wish, deposit the value with you.

As to the prices of appliances, I really think those who complain are not energetic enough to look round. A firm advertised frames, brood or shallow, at 50 for 10s. 6d., delivered, and received *one* order from three insertions in the *B.B.J.*

In the army, if you wanted anything, you had to be a good SCROUNGER.

Dealing with Diseased Bees in Hollow Trees, etc.

[10694] In reference to your article in the BRITISH BEE JOURNAL with regard to Legislation on Bee Diseases, I am quite in favour and should reckon all beekeepers throughout the country would plump for anything which will help to stamp out this disease which is causing us so much trouble and loss.

It has occurred to me from observation in a country district, that the worst trouble we have to contend with, is places such as hollow trees, roofs, etc., where swarms have migrated to in past season; in many instances these places are intact, but the bees are dead, in some they are inhabited but infected. One may restock and have healthy bees, but they soon find out these places. Robbing commences and we are very soon in trouble again. Now the apiarist sets to work on his hives and has to stand to all the trouble and expense, and in many cases loss.

Now, Mr. Editor, could not something be incorporated in the laws to *compel* landowners and others who posses these trees, etc., to notify them, and have them either done away with or thoroughly disinfected to the satisfaction of the authorities. Knowledge of these places can easily be obtained through keepers and villagers. I do not say this will effect a cure, but it seems to me to be the root of our trouble to-day and would go a long way to help us. I should like to have the views of other apiarists on this point.

HENRY C. WEST.

Hubam Clover.

[10695] I hope your cuties will bear with this letter, considering it is not about bee-keeping. Seeing the very glowing account of this wonderful plant I was induced to try its growth before venturing into purchasing a clover farm. A small packet of seed was sown on April 11, and plants duly appeared above ground about a fortnight later. Growth was very poor and slow first month, flowers appeared first week in August, and now (September 15) the small plot carries a good crop of plants 4 to 5 ft. high, and a mass of flowers, the aroma of which is very

strong some yards away. The sub-soil is clay, top-dressed with lime, and one end of the vegetable garden was set aside for it. I have only seen odd bees working in it, but think we may blame a wet cold August for this.

It would be very interesting to all bee-keepers to know how it has fared with others, but in my humble opinion, if a 10 or 12 acre field could be procured in full flower during a warm June or July there would be something doing for the bees, it is hardly fair to judge it during a wet cold August. Then, of course, the price would have to come down considerably before farmers would tackle it. The plant appears to be an admirable food for cattle if used green, but I should imagine it would be impossible to harvest it as a dry food so late. Perhaps others have obtained theirs earlier with far different results.

Ockbrook, Derby. H. HILL.
15-9-22.

Acarine Disease.

[10696] I was very much interested in "Cornish Chit-chat" notes of September 7, alluding to Par. 10,666, viz., a cure for Acarine disease, and his wondering if the use of sulphur by him had accidentally worked a cure on an affected swarm.

When judging at the Inverness and Aberdeen Horticultural Shows last month, by way of a lecture afterwards, I gave the following cases in which sulphur, in conjunction with camphor, had worked cures:—

No. 1.—Last year a hybrid Carniolan stock, though not suspecting the presence of Acarine disease, got heavily affected, and when noticed, bees were crawling thickly.

I took an ordinary empty tin box which had previously contained blacking, perforated its lid with small holes, and inside placed several bits of cotton wool moistened with sulphide of ammonia, together with one bit moistened with spirits of camphor, closed the box and placed it lid downwards under the quilt. This was renewed every second day till crawling ceased; afterwards, occasionally. The stock recovered.

This year I have allowed it to swarm three times, and have taken off a full rack of sections, leaving a second one on with partly drawn-out comb.

No. 2.—Last year a hybrid Italian stock was noticed when crawling had just commenced. The same treatment was applied. It also recovered. This year it has given two full racks of sections.

No. 3. Last year, for experimental purposes, to a hive of black bees, stocks of bees crawling, through Acarine disease, were, after being drummed from skeps, united to it on four separate occasions during the season. The stock, with the same treatment described, was cleared of the trouble each time, and went into winter quarters quite fit and strong. Unfortunately, along with other stocks of blacks, it was washed away by floods that visited these parts New Year's night.

As a preventive and cure in mild cases, I make a mixture of ¼ lb. flowers of sulphur and a dessert-spoonful of flowers of camphor, subjugate the stock and blow about a teaspoonful of the mixture at a time in at the entrance of the hive with bellows, repeating it occasionally as a preventive.

The disease is caused by the mite *Acarapis woodi*. One thing a mite cannot stand is sulphur, especially when combined with camphor; this was the thought that led to the treatment described.

Of course, affected stocks must always be headed by a prolific queen, if not re-queen at once. From experience I feel perfectly convinced that where these lines are carried out, cures will be effected. In all the above cases a microscopical examination of the bees was made and the presence of the mites verified.—GEO. H. PRITCHARD, Font View, Beauly, Inverness-shire, September 14, 1922.

The "Snelgrove" Method.

[10697] I was very pleased to see that Mr. Snelgrove has given full details of his valuable and simple method of queen introduction by immersion in water, and I only wish that all your readers could also have seen his most interesting way of showing how it was done at the Cannington Court gathering. Having had an opportunity of examining the hives operated upon since that event I can answer for the safety of the queens which have gone on laying as though still in their original hives, though we disturbed them two hours after introduction in order to show the audience they had been peaceably accepted, a proceeding which is deprecated by Mr. Snelgrove. At the time of the meeting I ventured to doubt whether the procedure would be as successful in other hands as in those of Mr. Snelgrove, but since then I have visited several districts in Somerset and have found that many of the bee-keepers, fired by his example, have been interchanging and introducing queens by his method, and in every case have been successful, though one was an absolute novice who had never introduced a queen before. In conclusion I may state that in this method of introducing queens we have advantages well worth the trial of every bee-keeper.

W. A. WITHYCOMBE.
Docks, Bridgwater.

Questions, &c., for Bee-Keepers for Self-Examination.

(Students are recommended to write their answers, and check them afterwards by reference to books.)

669. Make a list of the enemies of bees in this country and abroad, and state how they are circumvented in each case.

670. Explain how bees gather pollen and pack it for conveyance to the hive—as observed by Casteel

671. What should be done to make re-queening by letting the new queen run down between the combs from the top a success?

672. Sketch the several kinds of hairs found on bees and state their uses.

673. How does a bee fly? (Give a full explanatory answer.)

674. Describe and draw sketches of the mite, *Tarsonemus woodi*.

J. L. B

Honey Imports.

The registered value of honey imported into the United Kingdom during the month of August, 1922, was £16,151. From a return furnished by the Statistical Office, H.M. Customs.

Bee Shows to Come.

A nominal charge of 2s. 6d. is made for notices (not exceeding 7 lines) in this column, 10 lines charged 3s. 6d. up to 15 lines 5s., which covers cost of insertion from order till date of show. Cash should accompany orders for insertion.

October 4 and 5.—The Society of the Four Northern Counties limited to Cumberland, Durham, Northumberland, Westmorland, Congress and Fruit Show, also Bees and 15 Classes for Honey, to be held in the Market Hall, Kendal.—Schedule for Honey Section from G. Chatham, 18, Stramongate, Kendal. **Entries close September 27.**

October 12, at Ongar, in connection with the Ongar and District Agricultural Association.—Extracted and Comb Honey. Open to Essex.—Schedules from G. A. Taylor, Hon. Sec., Ongar and District Bee-keepers' Association, Ashcroft, Ongar.

Special Prepaid Advertisements.

One Penny per Word.

Will advertisers please read these Rules carefully in order to save trouble, as they will be strictly adhered to?

Trade *advertisements of Bees, Honey, Queens, and Bee goods are not permissible at above rate, but will be inserted at* **1½d.** *per word as* **"Business"** *Announcements, immediately under the Private Advertisements. Advertisements of Hive manufacturers can only be inserted at a minimum charge of 6s. per* ½*in., or 12s. per inch.*

PRIVATE ADVERTISEMENTS are only intended for readers having **Surplus Stock** *to dispose of.* **Driven Bees, Nuclei,** *and* **Queens that are reared or imported for sale,** *are Trade Advertisements, and can only be accepted under trade terms. A charge of 6d. extra per insertion will be made if a box number is used.*

Advertisements must reach us NOT LATER than FIRST POST on MONDAY MORNING for insertion in the "Journal" the same week.

Orders for three or more consecutive insertions in "The Bee Journal" entitle advertisers to one insertion in "The Bee-Keepers' Record" free of charge.

PRIVATE ADVERTISEMENTS.

TWO 10-FRAME STOCKS, plenty of stores for wintering, with hives, £2 each; also eight 10-frame Stocks without hives, 17s. 6d. each.—C. GIBSON, Bridge Foot, Radwinter, S. Walden, Essex. j.71

4 CWT. finest Light English Honey, £7 cwt., f.o.r.—LITMAN, Castle Cary, Somerset. j.93

THE World's Famous Raspberry, Lloyd George, perpetual fruiting, 10s. dozen, 60s. and 70s. per 100.—J. J. KETTLE, The Violet Farm, Corfe Mullen, Wimborne, Dorset. h.78

GOING ABROAD.—Complete Apiary; 4 Stocks Italians, in W.B.C. hives, 1, 16 x 10 frames, 4 Racks Sections, 6 Supers Shallows, 7 Lifts, 3 Excluders, 3 Clearers, Geared Extractor, 3 Grad. Feeders, 2 Rapid, 260 Metal Ends, Veils, Smoker, 7-frame Nucleus Hive, 3 Hives now on heather. £25 the lot.—29, Balfour Road, Urmston, Manchester. j.55

FINEST ENGLISH HONEY, quality guaranteed, in 28-lb. tins.—HARVEY, Apiarist, Andover. r.h.76

FOR SALE, two strong Stocks Hybrid Bees, 10 standard frames, £2 each; box 5s. extra, returnable.—PURT, 30, Bootham Square, York. j.50

AUTUMN HOLIDAYS.—Private Apartments or Board-Residence. Special terms for long periods.—MRS. T. BETTS, 60, West Parade, Rhyl. j.54

WANTED, English Honey. Send lowest price.—Box 91, B.B.J. Office, 23, Bedford Street, Strand, London, W.C.2. r.j.67

HAVING retired from exhibiting, my splendid Trophy Stand, second to none, for Sale; price and particulars, with photo, 8d.; also Observatory Hive, stamp.—PEARMAN, Longford Street, Derby. r.j.29

GOOD quality Rasp Canes, delivery October, 7s. 9d. per 100, carriage paid.—HUNT, Bank Street, Somercotes, Derbys. a.j.48

SELL.—Two small powerful Acetylene Brass Head Lamps, with separate generator, suitable light car or cycle car, £3 the set; carriage forward.—HERROD-HEMPSALL, Old Bedford Road, Luton, Beds. c.77

BUSINESS ADVERTISEMENTS.

1½d. per word.

THE WISE BEE-KEEPER looks for quality. The South Hampshire Apiaries breed only from the very best strains. Result: Quality and satisfaction. Beginners' Outfits from £5.—All communications, H. E. NEWTON, New Milton, Hants.

HYBRID AND BLACK QUEENS, 1922, vigorous, 3s. each, post paid.—HARVEY, Apiarist, Andover j.91

HONEY FOR FEEDING, in 60-lb. tins, 30s.; free on rail.—HARVEY, Apiarist Andover. j.68

FINEST AUSTRALIAN HONEY, feeding our own apiaries on it, 28s. per 60-lb. tin. THAMES VALLEY BEES (Regd.), Teddington. j.79

SPECIALS. Select, tested 1922 Queens, surplus to requirements, Italian, 7s. 6d.; Hybrid, 7s.; Black Hybrid, 7s. 6d.; or Nucleus, 22s. 6d.; carriage paid.—TICKELL. j.72

SUPERFINE CANDY, 7 lbs., 7s. 6d.; 10 lbs., 10s. 6d.—TICKELL, Westbourne Apiary, Cheltenham. j.73

SAVE MONEY ON BOTTLES.—Excellent Jars, all sizes. Write for quotations before buying.—BOWEN. j.74

SURE TO PLEASE.—Famous Cotswold Queens carry their colonies through the winter in fine shape. Vigorous 3-banded Queens, 7s. 6d.—BOWEN, Coronation Road, Cheltenham. j.75

QUEENS, 1922, fertiles, Italian, Carniolan, Hybrids, 2s. 9d. each.—EVANS, Lattiford, Wincanton, Somerset. j.78

IMPORTED Carniolan Queens, 8s., September.—B. WOODLEY, Thorne, near Doncaster. j.61

ITALIAN QUEENS by RETURN OF POST. Tested, 9s. 6d.; Untested, 7s. 6d.—PEARSON & GALE, Marlborough.

"W.B.C." HIVES.—Make your own. Saves pounds. Simplified Working Drawings, 2s. 6d. Understood by anyone.—CANDY, 28, Dovey Road, Moseley, Birmingham. j.77

WOULD friend loan £100 at low interest to assist two ex-Service men in developing good business? Security and repayment in four years by equal instalments; advertiser an old bee-keeper.—Box 92, B.B.J. Office, 23, Bedford Street, Strand, London, W.C.2. j.82

CANDY.—The very best from pure cane sugar, medicated or plain, 7 lbs., 7s. 6d.; 10 lbs., 10s. 6d., post paid.—R. HARVEY, The Apiarist, Andover. j.80

IMPORTED ITALIAN QUEENS, 6s., until middle October; Bottles, 1lb. screw-cap, wads, 29s. gross.—HENSLEY, Luton Apiary, Chatham. j.76

BUYERS OF FAKENHAM QUEENS return again and again—not for nothing. The choicest examples of true pure Italian Queens are being broadcasted throughout the United Kingdom this season solely because bee-keepers will have them. Recommendation orders are more numerous than ever. One or other of your fellow bee-keepers is almost sure to run a Fakenham queen, or many. They'll gladly tell you why. A low price for sterling value, 7s. each.—ATKINSON, Fakenham. r.j.32

"YOUR EFFORTS have certainly succeeded, and the Queens you are producing are all you describe them to be. I am sending you the order that I usually send to Italy this time of year. Please send me 12 queens at your earliest for re-queening. The six I had during the past two weeks are beauties. One, however, disappeared after introduction, while all of the others were laying heavily on examination at the usual period after introduction. One of the first queens you sent had four combs filled with eggs and brood in a week. Few queens are purchased with such vitality. I congratulate you upon your success in thus securing a system of mating that maintains vitality and gives such satisfaction—more than I have ever obtained in my 40 odd years as a bee-keeper. I enclose my cheque."—W. R., September 5, 1922.—Them are ATKINSON'S, Fakenham, and none other. r.j.38

THROUGH uniting nuclei for wintering, following 1922 Queens for Sale: Imported Dutch Queens, 4s. 6d.; Hybrid Swiss-Italian, 6s.; imported Italian, 7s.; Swiss and Carniolan, 8s.—DAVIDSON, Bee-keeper, Burton-on-Trent. j.14

BEES REARED ON ALF. RYALL'S LINES keep well. Buy his advice.

"WIGHT" AND "ACARINE" DISEASES.—Prevention and removal; invaluable advice; 5s. 6d. "An eye-opener."—ALF. RYALL, 6, Ospringe Road, N.W.5. r.c.87

TAYLOR'S WHITE SOFT CANDY.

Manufactured from guaranteed pure White Cane Sugar.

1/- per lb., post extra,

or 4lb. parcel, 5/- post free; 7lb., 8/- post free; 10lb., 11/- post free.

Special quotations for large quantities.

TAYLOR'S SYRUP for Autumn feeding.

7lb. tin, 8/9, post 1/6; 14lb. tin, 16/6 carr. ford.; 28lb. tin, 32/6 carr. ford.

E. H. TAYLOR, Ltd., Beehive Works, WELWYN, HERTS.

"FAKENHAM QUEENS," writes L. K., 21/8/22, "have done exceptionally well this season. Hope to give you order for 20 next spring." Could anything be more convincing of queen value in a difficult season when most bee-keepers have got poor returns or none at all from their hives worth noting.—ATKINSON. r.j.34

I'VE GOT SOME fine pure Italian Queens for British bee-keepers. Try me. If you don't like them, return first post and have your money back, plus postage, by next post.—ATKINSON, Fakenham. r.j.33

AGAIN.—W. B. writes, 9/8/22: "Please forward another. Your queen received before has done exceptionally well." Atkinson's, sure. Them's it! r.j.35

BEAR IN MIND, please, when you receive a Fakenham Queen she is at the outside but six weeks old from her cradle; not merely a vague "1922 queen," but actually a vigorous youngster, ready to take up the lead of the biggest or smallest colony you've got awaiting her. Most are just past the test stage—four to five weeks old. No stale surplus nor oddments are carried and I know as well as you you don't want that sort.—ATKINSON. r.j.36

WRITES H., 4/9/22: "Your Queens are in strong demand here. I like them, too." They all do. Why not, at 7s. each, too, and beauties! Listen to the next, and not least. r.j.37

JACK TICKELL.—For Queens, Stocks and Nuclei. List free. — Westbourne Apiary, Cheltenham. r.a.54

HONEY FOR BEE FEEDING.—Australian, new, 60-lb. tin, 35s.; West Indian, new, 56 lbs. 38s. 6d.; Californian, old crop, 60 lbs 30s.; carriage paid; reduction quantities; samples on application.—LONDON TRADING AGENCY, 32, St. Mary Axe, London, E.C.3. r.j.47

GORDON ROWE, 28a, Moy Road, Cardiff, requires gross lots new 1st grade Sections.

PARCHMENT CONTAINERS, stamped "Fine Lemon Curd," offered at half price to honey producers who can affix labels over the printing, 1 lb., 4s. 9d.; ½ lb., 4s.; ¼ lb., 3s. 6d.; ⅛ lb., 2s. 3d. per 100. Add for carriage 1s. 6d. to each 5s. value ordered. Terms cash. 2-5 cwt. lots light English Run Honey required urgently. Send sample and price.

TO BEE-KEEPERS

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For best bees, queens and appliances come to PEARSON & GALE, Marlborough.

The Bee-Keepers' Calendar.

OCTOBER, 1922.

6 Friday. "V's the View we take of Labour.
Shall we work for fame or pelf?
No, the Worker bee shall teach us
'Each for all, and none for self.'"
A Bee-keeper's Alphabet.

7 Saturday. "But the hives themselves
Whether you have them sewn of hollow bark,
Or whether of tough osier wands,
Need narrow inlet holes: for Winter's cold
Congeals the honey, and again the heat
Softens it all to juice."—*Virgil, Georgics, Book IV.*

8 Sunday. "The very honey of all earthly joy
Does of all meats the soonest cloy:
And they, methinks, deserve my pity
Who for it can endure the stings,
The crowd and buzz and murmurings
Of this great hive, the city."
Abraham Cowley, "The Wish."

9 Monday. "And the song she was singing ever since
In my ear sounds on:—
'Stay at home, pretty bees, fly not hence!
Mistress Mary is dead and gone.'"
Whittier, "Telling the Bees."

10 Tuesday. A drop of honey catches more bees than a hogshead of vinegar.
Proverb.

11 Wednesday. "The honey-comb has a heart of honey,
And the humming bee's so bonny."
A honey-comb and honey flower
And the bee shall have his hour."—*Rossetti, "Chimes."*

A Hint to Exhibitors.

Mr. Brown, of Bristol, who is again judging the honey, etc., at the Dairy Show, has written asking us to warn exhibitors not to overlace sections, or exhibit extracted honey in the wrong class for colour. As Mr. Brown says, it is very unpleasant to have to disqualify good exhibits, but as the rules are definite the judge has no option. This is a point many exhibitors do not realise. If the rules say, for instance, that sections must have a clear space of glass 3⅛ in. x 3⅛ in., the judge must disqualify exhibits infringing the rule; should he award such exhibits a prize it is open to other exhibitors to lodge an objection.

The Ayrshire Agricultural Society, whose show is held on October 19 and 20, are giving good prizes for honey, and the show offers a good opportunity for bee-keepers in the north to put up a good display. There are several open classes. Entries close October 6. At the show the rule for section lacing is that it must not exceed ⅜ in. in breadth.

A Dorset Yarn.

"Dost thou love life? Then do not squander time, for that is the stuff life is made of."

Many of us can take a lesson from bees in industry. Their life is work; when stores are plentiful there is no such thing as standing still, but all is hurry, all work as swiftly as possible. They love life, but it is the life of labour. Even these last days of September, bees are away over the flowers. Watch the hives. You can see them still carrying pollen; they hurry over the raspberry flowers, over the asters, are even over the violet flowers, they still fly to the moorland where the heather grows. With man it is the same. If we "love life," time must not be wasted; life will lose its greatest asset if we grow indolent.

A parson, after 45 years' service in the Church, told me last week that he, with a poor stipend, had kept bees and poultry, and had educated his family, that cost him two thousand pounds, as the results of his work with them. The low stipend made him look for ways to add to his income—how well he succeeded that large sum proves—and now at the close of a long, useful life he wants a small place to live out the end of his days with his bees and his fowls; he wants to come south with them. It is a poor year if he does not get £50 from his bees (he has only a small apiary now). Of course he realises that time must not be wasted, "for that is the stuff that life is made of." Some writers say, "Live while you live, seize the pleasures of life"; happy he who takes a pleasure in work, for "life is labour."

When one hears another talk of what can be done with bees and poultry, it is like a clarion call to labour. A life of labour keeps one healthy and fit. Burns tells us that "Life's a galling load." He must have been ill when he wrote like that, for I think it was he who wrote, "How pleasant is the morning of life." But hear a parson talk of what can be done with poultry; the chief points of the good strain of them, as well as the best working strains of bees. One could not help but wonder at so much knowledge. It made one think of the schoolmaster or parson (I forget which) in "The Deserted Village" of Goldsmith: "That one small head should carry all he knew."

Bee-keepers must realise that "time is the stuff that life is made of." We must see that all is done to make our hives secure; they must not be neglected now the honey flow is past. The pleasure we get out of life will be by seeing our little friends made up snug and warm for the winter; we must see that the rough winds that are sure to come as the days shorten do not blow the covers from the hives; all should be made secure. This will make their life secure for the winter. In summer bees will put up with a lot; they can get material for filling up cracks in their homes; but if winds loosen the brood chamber when no more material can be got, when there is no warmth to make the old material plastic, it will go hard with them in the winter.

If beekeepers are extending their acreage of fruit, now is the time for preparing the ground. We are starting rasps in a 4-acre plot. It has had all the turf turned in with the plough, and where the lines of rasps will be planted it will all have the strong new digging forks to work it deep, so that the moisture will be drawn up from the subsoil in the dry days of summer. They do so much better if the soil is broken deep. The time will be well spent in doing this. Mark out the long lines about 12 or 14 feet apart; this will leave a good space between them that can be worked with a one-horse plough. We have some planted in lines 6 feet apart, and even with these we run the plough through them in winter and the cultivator in summer.

At Mr. Brittain's garden at Brockenhurst I saw the white sweet clover growing between his lines of apples. It was 5 and 6 feet high, and he was cutting it for stock now that the bees had had their fill from the flowers. He had a bundle of it tied up at the Brockenhurst honey show. I also saw at that show a display of honey set up with mirror glass, which made the display look very pleasing. This idea was also carried out by Mr. Tomlinson at the Wimborne honey show, to look down on the mirror base and see the display reflected made it look much larger. The space allotted him had a window at the back, which made his clear, light honey look its best. At the Brockenhurst show the bottles of extracted honey had been given first honours at other shows, but at Wimborne they were reversed from Dorchester and Blandford shows.

There is no doubt that shows help to educate the beekeeper. The different judges also give the exhibitor a possible chance of being first when he did not get a place in another show. It is the same with wax. In the Dorset shows no one man carried off the highest honours, though the same had a place in the first three each time.

"Time is the stuff that life is made of." Those who want to exhibit honey at the great exhibition next year must not sell all their bottled honey, as the show will open early in the year. As each week advances, the exhibit can be supplemented with new sections and new extracted honey. Those who are near will be able to make a great display to show what their bees will do in building up the food stores of the nation. Those of us who live so far away must leave it to the home counties to carry out; though we would like to show what Dorset can do.—J. J. KETTLE.

Jottings from Huntingdonshire

Another fine week has given the nectar gatherers a glorious opportunity to make good. Syrup over the feedhole untouched told its own story. A cursory examination of the brood nests revealed stored syrup and much stored nectar, new comb built out filled and sealed over, and all the result of acres of mustard. I estimate that there has been

fifty pounds of nectar waiting every day for a fortnight to be gathered. It would therefore be surprising did the bees not secure at least one-third of it. One stock stored "tight," an empty drawn-out comb inserted into the middle of the brood nest, and a full one taken out and given to a weaker colony relieved the situation. It is essential that breeding should continue, and I am relieved to note that most of the queens are rising to the occasion, in varying degrees, however. A few hives are packed to overflowing; others have bees sufficient only to cover six combs, and the brood nest has been contracted accordingly. The ivies are beginning to bloom; the last source of nectar and pollen in quantity. No time, therefore, should be lost in uniting up where this is necessary. The uniting of two small stocks often results in late autumn and early spring breeding, while if a small stock be left to itself, even if it survives the winter, spring will be well advanced before the queen commences to lay. There is this to be said for wintering a small stock or nuclei—if food and protection be good and the queen young and constitutionally strong, the long rest her majesty gets enables her to give a great account of herself in late March or early April, and her progeny will prove to be excellent workers.

I was rather startled to see in "The Bee World" Signor Penna advocating 12 per cent. sweetened water for outdoor feeding. I have never given less than 30 per cent., and in this country especially, except when we get summers like 1921, I should advise those who are compelled to do outdoor feeding to any extent to keep between 25 and 40 per cent. of sugar to each quart of water.

The recent bee-keepers' conversazione did not pass off without the usual gibe at Dutch bees. When will bee-keepers understand that bees from Holland need not be Dutch bees? By Dutch bees I mean native Dutch bees, not Italian or Tunisian bees domiciled in the land of tulips. If I sent a stock of my Golden Italians to Spain my Spanish friend might describe them as English bees, but that would not be correct. The true native Dutch bee is as near to our British black as any bee that can be got; they are splendid workers, beautiful cappers and swarmers, but not tryingly so if kept under proper conditions. Every Dutch stock will swarm once, with few exceptions. I have one which has not thrown a swarm this year, and it's the swarm that will make a good account of itself. Sections? Well, just let a stock of true Dutch have a rack and compare with any given to any other breed of bee at the same time, and if you're not converted—well, then, your prejudice is colossal. There are one or two things to bear in mind. Dutch bees will not tolerate dried-up comb, so let your foundation be as fresh as possible. If you can place it for a few hours in the sun before putting in the hive all the better, and don't use full sheets in the supers. Another point to remember; the racks must be warm. Dutch bees want room, and more room, but there must be no escape of warmth. Don't worry if your thermometer registers 100 degrees. Many a swarm would be prevented if this was continually borne in mind. Again and again one hears of bees being well supered, and yet they've swarmed. Small wonder! The supers are not sufficiently protected; the bees forsake them, cluster down below, get overcrowded, and out goes a swarm, which was not the intention of the bees. Of course, that swarming which is the outcome of a superabundance of royal jelly in the hive cannot easily be prevented, and in this case it is wiser to follow Mr. Price's advice: "If the bees have made up their minds to swarm, let them swarm, and use the swarm for all it's worth."—E. F. HEMMING, Steeple Gidding.

Week-End Bee-Keeping.

By S. H. SMITH, Cambridge.

(*Continued from page* 472.)

"In our climate the mite tribes are on the rampage in the early autumn, which is their season to mate and increase. Harvest and numerous other mite species are now swarming on grasses and plants in order to grasp hosts which will carry them to new pastures and supply the food needed to enable them to mate and lay eggs. It is reasonable to suppose the bee mite has similar seasonable rhythms or habits, but we do not yet know anything about them, or where to look for the mite outside of the bee."

"Hive No. 1 shows no 'crawlers,' and we have examined some of its bees to see if they harbour any mites. We found none. Why?"

"Because, D.B., the bees in No. 1 do not frequent the same plants, flowers or places that are visited by the bees of No. 2. Not having the same habits, they have so far escaped an infestation by mites. They will continue to be immune as long as they keep to their present ways."

"You will have noticed in this garden how bees form habits. Your young daughters are still supplying sweets on the plates we set out under the Judas tree last May. Regularly every day at tea-time bees come flying to the little feasts of syrup or jam Daphne and Beryll provide. But the bees are not there during other hours of the day. The original feasters of May died long ago, but the habit has persisted—passed on to one generation after another by some psychic process—call it, if you like, an associative memory instinct."

"This appearance of *Tarsonemus woodi* in No. 2 has upset all our plans. There is probably enough honey in the stocks for safe wintering, and possibly some surplus. But with 50 per cent. of its forces crippled, this apiary will pay no more dividends in 1922."

"I have not said anything about it before now, D.B., but all the moves and all the manipulations that we have practised so far have been leading up to the treatment of

diseased or mite infested bees. Sooner or later trouble was sure to appear. You will have little new to learn, excepting the reasons why we do this or that."

I was surprised to find D.B. accepting the situation so nonchalantly. Was it possible he did not grasp what was involved? All the D.B. family were grouped about No. 2, and Satan, the black cat, had joined us. Under the gentle care of the twins she was vastly improved in looks and manners. When she rubbed her now glossy and satiny coat against D.B.'s legs, he bent down and stroked her, then, standing up and looking straight at me, he remarked that : " The cat would yet save the day."

I must say that I grew pretty hot under the collar. He had made exactly the same foolish remark to me a dozen times since he bought Satan. I had always silently ignored them. If there was any catch I was certainly not going to bite. Then I caught all the D.B. family smiling at each other and a light went up. It was probably one of those inane family jokes incomprehensible and uninteresting to an outsider. So I quickly calmed down, and purred a bit myself.

" All of you have shown such an intelligent interest in our bees during the past spring and summer that I now want to enlist your sympathy and aid in trying to solve this mite trouble. You have seen the bees enjoying life during those few short weeks of fine weather. Now you see those of No. 2 distressed individually, and their communal life is disorganised and threatened with extinction. As I have explained, the trouble is caused by a minute predatory mite which invades the thoracic spiracles. What can we do to help the bees?"

" How long has this trouble been evident in England?" asked Mrs. D.B.

" Prominently—ever since 1904."

" Eighteen years! Then what advice can you expect from us who observe this trouble for the first time? "

" It is just because you will look at it without prejudice or any preconceived notions, dear lady, that I expect a good deal from your acute perceptions."

" If you had not told us of the mites, Mr. Week-End, I should interpret the actions of the bee's legs in stroking its abdomen as indicating pain in that region. Now I think that the bee is trying to brush off invading mites. Though invisible to our unaided vision, those mites may be perceptible to the fine sense of touch of the bee. Are the mites found in the abdominal spiracles, Mr. Week-End? "

" No, dear madam But your diagnosis is probably correct, and your discernment and deductions go far beyond any expectations I had formed, and do you great credit."

" Why not separate the poor, crawling bees from the other bees, Mr. Week-End? "

" An excellent idea, Beryll. That is the very first thing we shall do."

" When you separate the young from the old bees, Mr. Week-End, why not remove them so far away that they will have to form new habits? "

" Your suggestion, Daphne, is a very good one, and we may adopt it."

" In the trenches, Week-End, we fought fierce battles against similar though larger, tougher and beastlier forms of acarines. Given the time and the means we could conquer them. I see the difficulty of attacking mites entrenched in the air passages of small animals like bees. But surely there are forms of vapours that will kill mites without destroying bees? "

" We shall be using just such means, D.B., and your experiences will be of great help to us. I will say that all of you have shown an amazing intuition. Individually, and as a family, you would rank high in any intelligence test. I am proud to have enlisted you in this quest, and exceedingly hopeful about the results."

" As I did not come prepared to face the 'crawling' trouble, will you please excuse me until this afternoon, when I will return, bringing the necessary accessories for operating."

(*To be continued.*)

Economies of the Hive.

By E. C. HIPKINS, B.Sc.

(*Continued from page* 462.)

Natural variations in the rate of oviposition.—Cold spells will, in the spring, tend to cause temporary restriction of the brood nest, thus delaying a colony in the establishment of equilibrium. Good hives and warm, dry packing will minimise these effects. Shortage of food will also reduce the rate of laying. This must be obviated by feeding so as to ensure the constant presence of unsealed stores. The reduction in oviposition by the queen during the heavy flow is to the advantage of surplus, as the majority of the bees raised would join the field force too late to assist in the collection of stores.

Application.—Our aim must be rapidly to develop the brood nest in the spring, first so as to get the queen laying to her utmost capacity, and afterwards to keep her laying at this rate right up to the honey flow.

To effect this, every known method of stimulation should be employed, and great care should be exercised to prevent the queen being hampered in her laying, either by lack of room or stores, or by the loss of heat. By this means equilibrium is established early in the season, and the colony is ready to make the most of any honey harvest that occurs.

The colony having reached its maximum strength, careful manipulation becomes essential to prevent swarming. Much can be done in this direction by the provision of sufficient brood space for the queen and storage space for the fielders, by the elimination as far as possible of drone comb from the brood nest, by keeping the entrance large enough to prevent crowding, and protecting the colony from excessive heat from the sun.

By this means we reach the honey flow with a large balanced colony.

The time has now come to take advantage of the five weeks' lag between alteration in the rate of oviposition by the queen and its effect upon the reinforcement of the field force. The cessation of brood rearing will have a very considerable effect on the honey consumption of the colony, whilst for five weeks the amount of stores harvested will be as great as if the colony had been undisturbed.

The most certain way of effecting a complete cessation of brood rearing is to dequeen the colony and keep it queenless throughout the flow. As the flow seldom lasts more than five weeks, this can usually be done. The practice of dequeening in this way has been carried out in America, and some bee-keepers have reported very good results. It is, however, subject to very considerable drawbacks.

First, there is the risk that the bees, finding their future imperilled by the absence of a mother, may become demoralised, and, if this is practised, care should be taken to ensure the presence of queen cells in the hive, even if they are replaced by newer ones before the virgins are due to emerge.

Secondly, with our uncertain climate, the end of the flow cannot be definitely predicted, and should the colony be kept queenless for too long a period, great difficulty will be experienced in re-establishing a brood nest for autumn breeding.

Another method is to confine the queen to three or four combs, removing these as the queen lays in them, and replacing them with foundation.

Some German bee-keepers suggest confining the queen on frames containing starters, and removing them and destroying the comb built, and returning the frame to the hive again. This appears to me to be wasteful of the bees' labour, as good combs can be obtained by giving full sheets of foundation. These can be left until the queen has laid in the cells, when they can be given to small stocks which are being built up for increase.

Ample time remains after the removal of surplus for the development of a brood nest for autumn breeding.

If requeening is desired, the time to effect this is at the close of the flow when the young queen's chief advantage, that of laying without stimulation, can best be exploited.

Suggested treatment.—As soon as weather conditions permit, the hive should be opened and, if all is found satisfactory, surplus combs should be moved outside the division boards and stores scratched in the centre of the brood nest.

At each successive opening the brood nest should be extended in this way until a large nest is established. Judicious brood spreading should then be commenced and continued until the body box is fully occupied. As soon as all the combs are well occupied by bees and brood, that is, when they are in a crowded condition, half of them—preferably those containing the majority of sealed brood—should be put in a deep lift and the spaces between the combs in both lifts filled with empty frames or with foundation, the queen being left in the lower chamber.

During the early stages it is advisable to give the bees a supply of pea flour as a substitute for pollen until the natural supply becomes plentiful. Should the stores be insufficient, they should be supplemented by thin syrup.

If the brood chamber is doubled too soon that is, before the queen has a sufficient force of young bees to develop a high rate of oviposition it will result in a reduction rather than an increase in size of the brood nest.

Doubling having been effected, the future manipulation will depend upon the time which the bee-keeper has at his disposal. His aim should be to sort out the combs in the brood nest as soon as the new ones have been completed, so as to have empty combs next the one on which the queen is laying at the time, mature brood next, and so on, with a view to enable the queen to lay in cells as they become vacant without having to traverse a lot of occupied cells in search of isolated empty cells in which to lay, and he will probably be able to improve matters in this direction every time he opens the hive. Thus increasing the rate of laying of the queen by reducing her idle time. Frequent inspections will become necessary later on to search for queen cells and remove these to prevent swarming. Should any be found, it will be necessary to shake the bees off the comb to find all queen cells and ensure that the colony shall not swarm.

Should the two deep lifts be found insufficient, a third may be added. This is preferable to using a shallow lift, as the frames of comb can be mixed with those below in any subsequent sorting. They can be used for extracting afterwards quite as well as shallow combs.

With the addition of shallow lifts as may be necessary to accommodate surplus, this procedure, accompanied by regulation of the hive entrance to accommodate the colony, should be maintained until the main flow has definitely commenced.

The comb upon which the queen is found should then be taken and, with two or three frames of foundation, placed in the lowest lift and isolated from the rest of the hive by means of queen-excluding division boards and an excluder over the tops of the frames. After this, frequent openings become necessary to remove the drawn-out combs and replace them with foundation, combs occupied by eggs being given to young colonies for increase. The comb building proceeding on this limited scale will not seriously affect the surplus stored and will keep the bees in the mood for work. As the brood left in the remaining combs emerges, the cells will be filled with nectar and the combs can be removed for extraction. The old, dark combs can be reserved for winter stores.

Upon the removal of surplus, the queen is released and the combs in her compartment used to form the start of the new brood nest, those remaining in the chamber consisting of

a few empty combs, the remainder containing unsealed stores to induce the queen to develop the new brood nest. Later, stimulative feeding should be commenced to encourage this.

British Bee-Keepers' Association Conversazione.

LECTURE ON COMB HONEY PRODUCTION BY MR. D. WILSON.

So far as I have been able to follow the history of apiculture during the last two or three hundred years, the highest aim of the bee-keeper working for honey-production has been to be able to produce a fine sample of honey in the comb, in pure virgin comb unsoiled by either pollen or the cast cases of the pupa in combs where breeding has taken place. Such a piece of comb taken out of a hive—virgin honey it was called—was a treasure fit to put upon the table of kings. My hearers will readily appreciate the rareness of this phenomenon of a "virgin comb" in a hive of the old fixed type, if, like me, they have been trying to work a few skeps this year. This desire to produce a fine specimen of comb led to various other methods being adopted later on, such as bell-glasses placed over the hole in the crown of a straw hive, in which bees were encouraged or forced to build new comb, and which the bee-keeper by various methods tried to keep free both from brood and pollen, and not always successfully. I might mention such tricks as supering with another hive, nadiring, eking out, or a collateral system, all designed with this end in view along with the prevention of swarming. Then there arose the mighty bell-glass or super designed to hold forty, fifty, or even a hundred lbs. of honey, but it was not until the bar-frame system was introduced and the use of foundation became known, that the production of comb honey could be said to have entered the realm of practical apiculture. In old systems there was always the difficulty of obtaining the comb clean. When produced in the straw caps, bell-glasses and glass supers, it was unhandy, being too heavy and wasteful, unsuitable for the table, in too large combs, necessitating cutting before use, and therefore waste from honey running away.

There is no doubt that to produce comb honey of the highest quality, such as will win at exhibitions in keen competition, the bee-keeper is, to a large extent, dependant upon his bees. It has been found that bees cap their combs in different manners. Some fill the cells completely to the top, and then lay the capping directly on the honey. Others leave a little air space between the honey and the capping. The result is in the one case a comb of honey looking wet and watery, and unpresentable, although the honey may be, and no doubt is, quite good. In the other case, a very presentable comb is produced with a beautiful white capping. Of course, the first kind has no chance in competition with the second. Generally speaking, Dutch and British bees cap their combs beautifully, whilst Italians are liable to give the watery-looking capping. But, on the whole, I believe it is rather a matter of strain than of race—some strains, even of Italians, produce a good capping. In the breeding of queens and bees for sale it is a point which can be watched. Certainly the producer of comb honey, once having found a strain with this desirable quality, will strive to perpetuate this quality, and for comb-honey production, at any rate, will breed only from those queens whose progeny have proved to be good cappers.

Much depends upon the time when racks of sections are put upon the hive so as to ensure rapid filling and sealing. It is no good, if sections of quality are desired, putting on a rack at the commencement of the season and leaving the sections there until the end. The result will be sections filled with honey of varying qualities and from different sources, stained and travel worn both as to wood and wax. Instead he will rather wait until he is assured that he is at the commencement of a good honey flow, then put on his sections and get them filled as rapidly as possible. This time of honey flow will vary in different parts of the country. I cannot set out a hard and fast line or course of conduct. In some districts the best flow may be expected from the early fruit, hawthorn and sycamore blossoms, in others from clover or sainfoin, in others from heather. The bee-keeper should know his own district best, and when this continuous flow is to be expected, and he will arrange accordingly. For my own part, when not assured that I am at the best season of the year for a good flow, I work for extracted honey, afterwards placing on my sections when the good time is to be expected. Remember that the more rapidly these sections can be drawn out and filled the better will the resulting comb honey be—and there should be one kind of honey only in the comb. Where all honey is light in colour, the change is not so noticeable as where bees may gather a light honey at one period and then change to a dark one, or vice-versa, but a cessation of work for a day or two, to be again begun at a later time, leaves its mark on the sections, and is to be avoided. In this connection it is as well to mention an idea thrown out by the late Mr. Alexander of America, and that is feeding for comb honey. Not before or after a honey-flow, but whilst it is on. He advocated keeping certain stocks for comb honey and certain for extracting. From the latter he took the honey as it was stored, not waiting for it to be sealed, and fed it to the section stocks immediately after thinning somewhat with water. Thus at the time of the honey-flow he had the whole produce of several hives being stored in the sections of one hive, and stored so rapidly that the sections had not time to be soiled. Moreover, the honey was of one kind only. As the sections were completed he took off each one separately, not waiting for the whole. In this way he claimed to have solved the problem of rapid

section production. It is a method which, I must admit, I have not tried. I intended to try this summer, but it has been difficult enough to produce any extracted honey, to say nothing of sections.

HEATHER.

A word or two as to the production of sections on the heather. Heather work, of which I have had at least seventeen years' experience, is practically a branch of apiculture standing by itself, and has to be considered from a point of view different from any other honey production, being carried on when the population of the hive is decreasing rapidly from day to day, and not, as earlier in the year, increasing.

If the production of comb honey is the highest branch of apicultural art, then the production of heather sections is the summit of it. It may be taken as a truth that bees will not draw out the foundation on the moors, this although there are cases to the contrary just as, we suppose, there is an exception to every rule. This being the case, it becomes necessary to have sections drawn out ready for the heather. For this purpose I have used such sections as were not completed, filled with flower honey during the summer honey flow. But beware of using any mis-shapen ones—for the deformity will continue and be accentuated on the heather. Such sections as are chosen for storing on the heather are extracted and used again, being put upon the hives wet, thus making a sort of bait to tempt the bees up. But here, as elsewhere, only when a hive is overflowing with bees will they enter sections. It is annoying to visit hives on the moor and find empty what we expected to be the greatest success of the year. Now these hives overflowing with bees can be obtained by a simple trick. If you have once worked a row of hives on the moors you will have noticed the great strength of the end hives. They seem to gather the flying bees. In fact, they do gather them, and become exceedingly strong at the expense of the others. These end hives, then, are the ones to produce sections, and during a good flow they will fill and seal in a week. By taking advantage of this idea I have had sections weighing up to 18oz.

What hives or colonies are to be worked for sections? I believe this is a problem far deeper than the mere production of extracted honey. I would suggest that sections can only be produced above colonies simply overflowing with young bees and during a good honey flow. And use an excluder. There cannot be anything more annoying to a bee master than to find a few of his sections spoilt by brood. It is no use thinking that the brood will hatch out and then the section will be completed. The colour is spoiled, and a cocoon is left in the cell which would spoil any section.

BAIT SECTIONS.

It often happens that, in spite of all a bee-keeper can do to force his bees into sections, they refuse to enter therein, choosing rather to swarm or to fill up the brood combs with honey. In such cases it is a good plan, if the bee-keeper has any unfinished sections from the previous year, to place those in the section rack, either with honey in them or merely as drawn out comb, and it will be found that this will in all probability encourage the bees to work upwards and begin to draw out the foundation in the remaining sections.

It is imperative when working for comb honey that the hive be properly levelled. I do not mean levelled by the eye and then left as being near enough, but put properly by means of a spirit-level, being dead true from front to back and from side to side. It is this levelling dead true which will make the foundation in the sections hang absolutely perpendicularly and cause the comb to be built dead true. Bees without plumb line or level build their combs perpendicular, so if the sections do not stand true, the comb, when finished, will hang out either on one side or the other and spoil what would otherwise be a good section.

(To be continued.)

MONTHLY MEETING OF COUNCIL.

The Monthly Meeting of the Council was held at 23, Bedford Street, London, W.C.2, on Thursday, September 21, 1922.

The Chair was taken by Mr. W. F. Reid, and there were also present Mrs. M. K. Hodson, Misses M. D. Sillar and M. Whyte-Johnstone, Messrs. G. R. Alder, G. Bryden, G. J. Flashman, J. B. Lamb, J. Herrod-Hempsall, E. Walker, and W. H. Simms, Association representatives: Rev. E. F. Hemming (Hunts), Messrs. C. M. G. Winn (Essex), E. Ff. Ball (Bucks), J. Price (Staffs), F. Gravil (Cardigans).

In the absence of the Hon. Secretary at the Marseilles Conference, Mr. J. Herrod-Hempsall, Assistant Hon. Secretary, took his duties.

The minutes of the previous meeting were read and confirmed.

Letters of regret at inability to attend were read from Mr. T. W. Cowan, Sir Ernest Spencer, Rev. E. J. Bartleet, Messrs. A. Richards, W. W. Valon, E. P. Hussey, and E. B. Lowes.

The Medway and County Association nominated Mr. E. Semper as their representative, who was accepted, and then admitted to the council chamber.

As there was not a quorum for the Finance Committee, a meeting could not be held. The Assistant Hon. Secretary stated that receipts for July were £21 2s. 10d., and for August £10 0s. 3d. Payments in July were £5, and the balance in hand on September 1 was £94 14s. 0d. Payments amounting to £43 3s. 0d. were sanctioned.

Mr. Waldock moved: "That each County Association be requested to adopt a numbered label for use by its members and marked 'English Honey.'" After some discussion, during which it was pointed out that the word "English" might not be acceptable to Scottish and Welsh Associations, and that honey from any part of the Empire might be labelled "British," the motion was accepted, with one dissentient, the label to state "English," "Scottish," or "Welsh," as the case might be.

Owing to shortness of time and the absence of the Rev. E. J. Bartleet, his motion to raise the question of the inconvenience of the month of May for Final Examination was postponed until the next meeting.

At this stage the meeting was adjourned till 4.30, at Pritchard's Restaurant. On resuming, reports on preliminary examinations held at High Hurstwood, Swanley, Barnet, Cardiff, Bowdon, Warwickshire, Quedgeley, Derby, London, Carmarthen, Finchley, Thatcham, Bridgwater, Malmesbury, Aberdeen, Chelmsford, Sheffield, Bishop Auckland and Stafford were presented, and it was agreed to grant certificates to the following :—

Mesdames Mee, Hutt, V. M. Turner, S. Elks; Misses R. M. Baxendale, B. Buttar, M. Bonny, J. Corstorphon, A. Dunbar, A. M. Fergusson, E. Freeman, M. Gillman, M. C. Irving, M. L. McCracken, E. Plummer, J. Randall, L. Stokes, J. Stringer, M. Wilson, H. Marshall, R. Awdry, V. Adom, C. Eden, L. Briddon, J. M. Bremner, E. H. Gill, Cristy, Davis, V. Straker; Rev. V. Walker, Rev. Comber, Dr. W. St. A. St. John, Dr. Moore, Commander D. R. Graham; Messrs. J. R. Jones, D. Davies, J. T. Davies, G. R. Lidbetter, H. Franfield, W. H. Wheeler, O. F. Felix Cooper, A. Webb, C. Mason, R. E. Wyatt, C. B. Jones, G. Meek, T. Swain, J. A. Emery, B. A. Greenfield, A. Parr, Carter, Newport, T. Lee, Stokoe, Wilkinson, I. H. Blackburn, Courtney, H. C. Murrless, J. S. Le Resche, H. W. Edwards, F. Chambers, F. M. M. Leman, J. Ward, J. Hind, A. Smith, A. M. West, D. Fearn, J. Mackie, J. Watson, A. W. Anderson, L. P. Green, A. C. Allan, F. R. Chase, V. Jones, A. Pearce, Middleton, G. Stokes, J. H. Penny, G. Fisher, Chancellor, Chappell, A. Rumming, E. Walker, Wheeler, W. Bashforth, P. J. Packington, P. Lawson, C. Haynes, E. T. Gardener, J. J. Taylor, A. Pegg, M. Partridge, J. E. Bishop, G. W. Allivant, A. L. W. Barratt, W. Friend, A. Parker, W. J. Watkins, A. E. David, W. C. House, A. G. John, J. W. Ray, P. Grinstead, S. R. Marley, H. S. Pickett, H. J. Wadey, E. O. Cole, J. M. Wadey.

The Middlesex Association asked permission to hold a lecture at the B.B.K.A. Apiary at Golder's Hill Park on Saturday, September 23, which was granted, the Chairman remarking he hoped other affiliated Associations would make use of the apiary.

Next meeting of Council, October 19, at 25, Bedford Street, W.C.2.

Herts County Bee-Keepers' Association

BARNET AND DISTRICT BRANCH.

The Fifth Annual Honey and Beekeeping Appliance Show was held in the Pennefather Hall, Barnet, September 21 and 22, in connection with the Barnet Allotment Holders' Show, and proved a great success. Both the members' and open classes were well represented, and, in spite of the unfavourable season, 140lb. of honey was staged.

Mr. G. James Flashman, Hon. Secretary of the Middlesex Beekeepers' Association, kindly acted as judge, and his awards gave entire satisfaction.

In addition to the display of honey, an observatory hive stocked with bees was on show, and proved a great attraction.

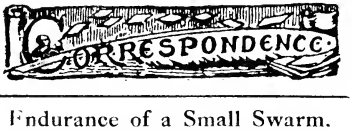
Messrs. E. H. Taylor, Ltd., of Welwyn, and Mr. Robert Lee, of Uxbridge, kindly sent hives and appliances, and these proved very interesting to the large numbers of people who visited the show.

The following is the list of prize winners :

Members' Classes.—Six 1lb. jars honey (extracted) : 1, Mr. H. W. Juniper, New Barnet; 2, Mr. E. Dymond, Whetstone. Three 1lb. jars honey (extracted) : 1, Mr. H. W. Juniper, New Barnet; 2, Mr. B. E. Scott, Wood Green. Three 1lb. jars Granulated : 1, Mr. H. W. Juniper, New Barnet; 2, Mr. N. S. Toms, Barnet.

Open Classes.—Three 1lb. jars honey (extracted) : 1, Mr. C. Robinson, Andover; 2, Mr. W. J. Wilson, Golder's Green; 3, Mr. J. G. Bale, Golder's Green. Three 1lb Sections : 1, Mr. Geo. Marshall, Newark; 2, Mr. C. Robinson, Andover; 3, Mr. T. A. Nott, North Mymms.

Mr. Geo. W. Judge, Hon. Secretary of the Kent Beekeepers' Association, is giving a lecture in the London Co-operative Society's room, High Street, High Barnet, on Thursday, October 12, at 8 p.m., admission free. All able to attend are cordially invited.



Endurance of a Small Swarm.

[10698] The following incident may, or may not, be of interest to readers of the "B. B. J.":

A cast issued from one of my hives on July 27 this year, and swarmed on a laburnum tree within a few feet of the hives.

It was too small, and the season too late, to be of much use, and, unfortunately, I did not know which hive it came from, so I left it, expecting to see it gone in a few days.

It remained, however, in an exposed position throughout the cold and wet days of early August for 25 days (until August 21), when it took flight, leaving no comb or other evidence of its life on the tree.

I used to examine the swarm daily with much interest, and observed that a few bees would detach themselves to search for food, and that returning bees would bore their way through the swarm, presumably to nourish the queen; also that the bees were continually on the move, as though the outer and inner "coverings" were changing places to obtain relief from exposure.

During the whole time I never saw a single dead bee on the ground below.

Such an occurrence may not be by any

means unusual, but to me, a bee-keeper of very limited experience, it seemed a feat of extraordinary endurance, and I should be interested to hear whether it is but a very ordinary and usual occurrence.

"S. W. ARM."

Hubam Clover.

[10699] I am interested in Mr. Hill's letter, because I have been making experiments with this plant.

Mr. Hill seems to think it would be better if it flowered in July. I imagine this would be the case if sown in autumn, but would it be any advantage to have a plant inferior to white clover in bloom at the same time? Coming on afterwards seems to me its chief merit. There is a grave drawback to Melilotus. Stock do not like it, and will refuse it unless they can get nothing else. Every writer says this. I have only tried it on goats, and they sicken of it very rapidly, whereas they will eat lucerne with relish. I should like to have some practical experiences from keepers of other stock. One writer states that it gives a peculiar flavour to milk and butter. Can anyone confirm or refute this? My goats not taking to it sufficiently, I have not been able to test it.

HERBERT MACE.

A Hint to Exhibitors.

[10700] I have accepted the invitation of the British Dairy Farmers' Association to again judge their honey and wax at the forthcoming show, to be held on October 17 to 20, and trust I shall not have the painful duty of disqualifying really good honey because of its colour (being entered in the wrong class), when it is so simple to get a pair of grading glasses from you. This rule is laid down so that any judge doing his duty has no alternative. JAMES BROWN.

[We hope intending exhibitors will take note of Mr. Brown's hint. As he says, a judge is bound by the rules of the show at which he is officiating, in both colour of extracted honey and the lacing of sections.—EDS.]

Bee Stings.

The Babe Hippónax ye did quell.
Heigho! ye blushless bees;
While, after honey the cell,
He crept on hands and knees.

Him ye attack'd, and kill'd (for shame),
With sting and sting agen:
And if, O passer by, we blame
The cockatrice's den,

Give ear unto Lysidikê,
And Myntor therewithal:
Cease praising of the honey-bee,
Whose sweet is bitter gall.

ANTIPATER, 2nd or 1st century B.C. Translated by G. R. Woodward, M.A.

Questions, &c., for Bee-Keepers for Self-Examination.

675. Describe what is done for the comfort and safety of queens transmitted by post.

676. What is "doubling"? What is its object and how is it done?

677. How are no-bee-way sections fitted in section racks? What are such sections useful for, and what drawbacks, if any, are there to them?

678. What are spiracles? Where are they situate in the worker, the drone, and the queen, respectively?

679 Describe minutely the life and movements of a larva, up to the cocoon stage.

680. Why are beginners in bee-keeping recommended to start on a small scale—with one colony, or two?

J. L. B.

Notices to Correspondents

Correspondents desiring an answer in the next issue should send questions to reach this office NOT LATER than the FIRST POST on MONDAY MORNING. Only SPECIALLY URGENT questions will be replied to by post if a STAMPED addressed envelope is enclosed. All questions must be accompanied by the sender's name and address, not necessarily for publication, but as a guarantee of good faith. There is no fee for answering questions.

"PUBLICITY" (Chilwell). *Killing and preserving bees.* (1) We find the best method of killing bees is the cyanide bottle, afterwards setting them out in the usual way. We do not know of anything to prevent shrinkage. (2) It is not necessary to have a queen in observatory hive for shop window display. The only objection is that the bees are more unsettled without a queen, and if at all crowded might from this cause and the confinement get excited, and there would be danger of overheating and suffocation. We would not confine them more than a day.

C. A. G. (Surrey).—*Substance found in hive.* The curious looking substances you sent consisted of a number of bees thorax, denuded of hair, legs and wings, and cemented together with propolis. The head was still attached to one thorax. The bees had died in the hive, but cannot say why they should be treated in this fashion instead of being turned out. Probably, as they died above the queen excluder and the bees were unable to get the thorax through the perforations.

T. J. A. (Norwood). The flower was a variety of Polygonum. It is allied to buckwheat (*Polygonum fagopyrum*), and is probably a good honey plant.

Bee Shows to Come.

A nominal charge of 2s. 6d. is made for notices (not exceeding 7 lines) in this column, 10 lines charged 3s 6d. up to 15 lines 5s., which covers cost of insertion from order till date of show. Cash should accompany orders for insertion.

October 12, at Ongar, in connection with the Ongar and District Agricultural Association.—Extracted and Comb Honey. Open to Essex.—Schedules from G. A. Taylor, Hon. Sec., Ongar and District Bee-keepers' Association, Ashcroft, Ongar.

November 16, at Beverley, in connection with the Beverley and District Chrysanthemum Society's Show. Open Classes.—Schedules from T. T. Taylor, Hon. Sec., Beverley and District B.K.A., 137, Keldgate, Beverley.

Special Prepaid Advertisements.

One Penny per Word.

Will advertisers please read these Rules carefully in order to save trouble, as they will be strictly adhered to?

Trade *advertisements of Bees, Honey, Queens, and Bee goods are not permissible at above rate, but will be inserted at* **1½d.** *per word as* **"Business"** *Announcements,* immediately under the *Private Advertisements. Advertisements of Hive-manufacturers can only be inserted at a minimum charge of* 6s. *per* 4in., *or* 12s. *per inch.*

PRIVATE ADVERTISEMENTS are only intended for readers having **Surplus Stock** *to dispose of.* **Driven Bees, Nuclei,** *and* **Queens that are reared or imported for sale,** *are Trade Advertisements, and can only be accepted under trade terms. A charge of* 6d. *extra per insertion will be made if a box number is used.*

Advertisements must reach us NOT LATER than FIRST POST on MONDAY MORNING for insertion in the "Journal" the same week.

Orders for three or more consecutive insertions in "The Bee Journal" entitle advertisers to one insertion in "The Bee-Keepers' Record" free of charge.

PRIVATE ADVERTISEMENTS.

THE World's Famous Raspberry, Lloyd George, perpetual fruiting, 10s. dozen, 60s. and 70s per 100.—J. J. KETTLE, The Violet Farm, Corfe Mullen, Wimborne, Dorset. h.78

EXCHANGE new Bee Appliances for Honey or Driven Bees.—LONGLEY, 35, Tharp Road, Wallington, Surrey. k.1

WANTED for the Continent, a Queen Breeder, methodical and capable of working to schedule time in producing queens in quantity; single person of either sex.—Apply, giving references, to Box 93, BRITISH BEE JOURNAL, 23, Bedford Street, Strand, W.C.2. k.2

SALE, giving up bee-keeping, two Hives with good Stocks of Dutch Bees on 10 frames, no disease, 2 Section Crates, 2 Shallow Frame Supers, 1 Smoker, 1 new Skep, 2 Bottle Feeders, 2 Sheets Excluder, £5; purchaser to remove or pay carriage.—DR. GUILLEMARD, "Protea," Camberley. k.3

FOR SALE, owing to removal, three Stocks of Italian Bees in frame hives, also Bar Frames, etc.; reasonable price.—MRS. SATCHELL, The Orchard, Putney, S.W.15. k.4

WANTED, English Honey. Send lowest price.—Box 91, B.B.J. Office, 23, Bedford Street, Strand, London, W.C.2. r.j.67

SELL.—Two small powerful Acetylene Brass Head Lamps, with separate generator, suitable light car or cycle car, £3 the set; carriage forward.—HERROD-HEMPSALL, Old Bedford Road, Luton, Beds. c.77

BUSINESS ADVERTISEMENTS.
1½d. per word.

THE WISE BEE-KEEPER looks for quality. The South Hampshire Apiaries breed only from the very best strains. Result: Quality and satisfaction. Beginners' Outfits from £5.—All communications, H. E. NEWTON, New Milton, Hants.

HONEY FOR FEEDING, in 60-lb. tins, 30s.; free on rail.—HARVEY, Apiarist Andover. j.68

FINEST AUSTRALIAN HONEY, feeding our own apiaries on it, 28s. per 60-lb. tin.—THAMES VALLEY BEES (Regd.), Teddington. j.79

QUEENS. — PRYOR, Breachwood Green, Welwyn. r.k.13

HONEY, in 60-lb. tins, 30s., f.o.r.; sample 6d.—COBB. k.14

CANDY, 4 lbs., 4s. 6d.; 10 lbs., 9s. 9d.; larger orders, 9d. per lb., f.o.r.—COBB, 33, Bevan Road, Plumstead. k.14

BEE-KEEPING.—Instruction by Correspondence Courses. Difficulties solved for beginners. Students thoroughly prepared for the British Bee-keepers' Association Examinations: (a) Preliminary, (b) Intermediate, (c) Final.—For particulars apply to PENNINGTONS, Horticultural Tutors, 254, Oxford Road, Manchester.

3 TONS SOLD.—Famous Cotswold Candy of incomparable quality; 4 lbs., 5s.; 7 lbs., 7s. 6d.; 10 lbs., 10s.; 28 lbs., 27s.—BOWEN. k.5

SAVE MONEY ON BOTTLES.—Screw jars, all sizes, all shapes. Inquiries appreciated.—BOWEN. k.6

7-LB. TINS, handles, bolted lids, 7s. dozen, carriage forward.—BOWEN, Coronation Road, Cheltenham. k.7

HUBAM CLOVER SEED.—For full benefit of this valuable honey plant, sow now; 1 lb., 10s.; ½ lb., 6s.; ¼ lb., 4s., post free.—R. STEELE & BRODIE, Wormit, Fife. k.8

FEEDERS.—A new pattern, slow or rapid, 3s., post free, 30s. dozen, carriage paid, with instructions for candy and syrup making.—MEADOWS, Syston. k.10

IMPORTED ITALIAN QUEENS, 6s., middle October.—HENSLEY. k.11

CANDY! CANDY!! CANDY!!!—4 lbs., 4s. 9d.; 7 lbs., 8s. 6d.; 10 lbs., 10s. 3d., post free.—HENSLEY, Luton Apiary, Chatham. k.12

HONEY, in 28- or 56-lb. tins, finest quality, for Sale.—HARVEY, Apiarist, Andover. r.k.15

CANDY.—The very best, made from pure white cane sugar, in 1-lb. cakes, 1s.; 7 lbs., 7s. 6d.; 10 lbs., 10s. 6d.; post paid.—HARVEY, Apiarist, Andover. r.k.16

NATURAL-RAISED fertile 1922 Queens, 5s. each —WOOLDRIDGE, Toddington, Winchcombe Glos. k.17

EX-SAPPER writes 29/9/22 *re* Fakenham Queens: "Spring count 5 colonies (queens introduced June, 1921). One gave 142 lbs. surplus, no swarm. Four worked also for increase, make final 1922 results, 17 8- and 10-frame colonies for wintering, six 10-frame colonies, and three 4-frame nuclei sold, and 5 cwt. of surplus honey. Not six stings from your strain the whole season. Your ten 1922 queens supplied are doing well. Please book me 50 1923 queens." Where in Great Britain this season has that been equalled by any other race or strain of queens and bees? It spells good bee-keeping, exceptionally good bee-keeping, good queens, and the first-class bees only real good queens can ever produce. All were faced with a bad season, *just like yours.* Not bad, is it? k.18

BEES are working on this now—Hubam Clover. The wonder honey plant.—R. STEELE & BRODIE, Wormit, Fife. k.9

ITALIAN QUEENS by RETURN OF POST. Tested, 9s. 6d.; Untested, 7s. 6d.—PEARSON & GALE, Marlborough.

ATKINSON'S FAKENHAM QUEENS plus ex-Supper's care and attention account for the foregoing little lot. My Queens will yet be in supply until mid-October, or while they last; quite young, pure Italian strain, price 7s. 6d. each. ATKINSON, Fakenham. k.19

LONDON DOCTOR breaks into holiday hours and writes from Austrian Tyrol, 4/9/22, a striking appreciation of Atkinson's Queens (the Fakenham sort). "Has tried out many others queens, and in a significant phrase adds he is "clearing them out." Too late this season to publish full details. See "B.B.J." columns next spring. k.19

CANDY.—The very best from pure cane sugar, medicated or plain, 7 lbs., 7s. 6d.; 10 lbs., 10s. 6d., post paid.—R. HARVEY, The Apiarist, Andover. j.80

HAVE YOU READ "THE BEE WORLD"? If not, why not? Every number in itself is a useful literary work for practice and reference. Specimen copy free.—Offices: THE APIS CLUB, Port Hill House, Benson, Oxon.

TO ALL SECRETARIES and BEE-KEEPERS.—Send to me for samples of Honey for autumn feeding.—F. GOODRICH, 10, Weston Park, Crouch End, London. h.106

STRICTLY BUSINESS.—6 lbs. Flavine—S. B. Candy, 7s.; 10 lbs. Flavine Honey Sugar, 10s.; 10 lbs. Autumn Sugar Syrup, 8s.; all carriage paid to any address in Great Britain.—S. H. SMITH, 30, Maid's Causeway, Cambridge. h.23

HEALTHY DRIVEN BEES, with fertile Queen, 7s. 6d. per lot, carriage paid; boxes returnable; cash with order. PULLEN, Ramsbury, Hungerford. j.60

THROUGH uniting nuclei for wintering, following 1922 Queens for Sale: Imported Dutch Queens, 4s. 6d.; Hybrid Swiss-Italian, 6s.; imported Italian, 7s.; Swiss and Carniolan, 8s.—DAVIDSON, Bee-keeper, Burton-on-Trent. j.14

BEES REARED ON ALF. RYALL'S LINES keep well. Buy his advice.

"WIGHT" AND "ACARINE" DISEASES.—Prevention and removal; invaluable advice; 5s. 6d. "An eye-opener."—ALF. RYALL, 8, Ospringe Road, N.W.5. r.c.87

HONEY FOR BEE FEEDING.—Australian, new, 60-lb. tin, 35s.; West Indian, new, 56 lbs. 38s. 6d.; Californian, old crop, 60 lbs 30s.; carriage paid; reduction quantities; samples on application. LONDON TRADING AGENCY, 32, St. Mary Axe, London, E.C.3. r.j.37

GORDON ROWE, 28a, Moy Road, Cardiff, requires gross lots new 1st grade Sections.

PARCHMENT CONTAINERS, stamped "Fine Lemon Curd," offered at half price to honey producers who can affix labels over the printing, 1 lb., 4s. 9d.; ½ lb., 4s.; ¼ lb., 3s. 6d.; ⅛ lb., 2s. 3d. per 100. Add for carriage 1s. 6d. to each 5s. value ordered. Terms cash. 2-5 cwt. lots light English Run Honey required urgently. Send sample and price.

TAYLOR'S SOFT WHITE CANDY.

Manufactured from guaranteed pure White Cane Sugar.

1/- per lb., post extra,

or 4lb. parcel, 5/- post free; 7lb., 8/- post free; 10lb., 11/- post free.

Special quotations for large quantities.

Feeders, Quilts and Winter Appliances of every description. Illustrated Catalogue post free on application.

E. H. TAYLOR, Ltd., Beehive Works, WELWYN, HERTS.

Ayrshire Agricultural Association

Sixty-Eighth Annual Show
of
Dairy and Farm Produce
also
Buttermaking Competition

At KILMARNOCK, 19th and 20th October, 1922.

Special Competitions for POTATOES, VEGETABLES, FRUIT and HONEY, also ALLOTMENT HOLDERS' CLASSES and HOME BAKING Competitions.

Total Premiums—£500.

Entries close FRIDAY, 6th October.

Premium Lists on Application to—

JOHN HOWIE, Secretary,
58, Alloway Street, Ayr.

The products of the Apiary, of Poultry and Farm Stock, of the Fruit and Vegetable Garden can be Advertised and Sold through

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Get a Copy—Thursday and Saturday, 3d. The "Bazaar" publishes also practical handbooks by experts. Send for full catalogue, post free from WINDSOR HOUSE Bream's Buildings, LONDON, E.C.4

MEDICATED OR PLAIN WHITE BEE CANDY.

4 lb. parcels, post free, 4/6; 7 lb. parcels, post free, 7/3; 10 lb. parcels, post free, 10/-.

Special quotations for larger quantities.

HAWKES BROS., LTD., CHELMSFORD, ESSEX.

For best bees, queens and appliances come to PEARSON & GALE, Marlborough.

Books for Beekeepers now in Stock.

Cash in full must be sent with order.

	s.	d.	Postage
A B C and X Y Z of Bee-Keeping	17	6	1/-
A Book About the Bees (Mace)	4	0	4d.
Advanced Bee Culture (Hutchinson)	6	0	1/-
American Honey Plants (Pellett)	14	6	9d.
Answers to Bee Questions Commonly Asked (Root)	0	8	2d.
A Thousand Answers to Bee-keeping Questions (Miller)	6	0	6d.
Bee-keepers' Vade Mecum (Gfary)	2	6	3d.
Bee-keeping (Phillips)	17	0	6d.
Bees: For Pleasure and Profit	3	6	4d.
Bees and Bee-keeping (Cheshire) Vol. I.	12	6	9d.
Vol. II.	15	0	1/-
Beginner's Bee Book (Pellett)	5	0	4d.
BEE-KEEPING SIMPLIFIED FOR THE COTTAGER AND SMALLHOLDER (W. Herrod-Hempsall, F.E.S.)	1	0	2d.
BRITISH BEE-KEEPERS' GUIDE BOOK (T. W. Cowan) Paper covers	2	6	3d.
Cloth covers	3	6	4d.
Dadant System of Bee-keeping	6	0	3d.
Dissectible Model of Queen Bee	4	6	3d.
FERTILISATION OF FRUIT BLOSSOMS BY BEES (T. W. Cowan)	0	3	1d.
Fifty Years Among the Bees (Dr. Miller)	9	0	6d.
First Lessons in Bee-keeping (Dadant)	6	0	4d.
How to Keep Bees (Anna B. Comstock)	11	6	4½d.
Langstroth's Hive and Honey Bee. Revised by Dadant	14	6	1/-
Life of the Bee (Maeterlinck)	5	0	4d.
Modern Bee Farm, A (Simmins) *(Can only be obtained from this Office or direct from the Author.)*	7	6	9d.
Mysteries of Bee-keeping Explained (Quinby)	9	0	9d.
Out Apiaries (Dadant)	6	0	6d.
Pollination of Fruit in relation to Commercial Fruit Growing (C. H. Hooper, F.R.H.S.)	0	6	1d.
Practical Queen Rearing (Pellett)	6	0	3d.
PRODUCING, PREPARING, EXHIBITING AND JUDGING BEE PRODUCE (W. Herrod-Hempsall, F.E.S.)	2	0	3d.
Productive Bee-keeping (Pellett)	10	6	1/-
Queen Rearing in England (F. W. L. Sladen)	1	6	3d.
Scientific Queen Rearing (Doolittle)	3	6	3d.
Snelgrove's Method of Re-Queening	0	6	1d.
The Bee Master of Warrilow (Tickner Edwardes)	7	6	4½d.
The Life of the Bee (Maeterlinck)	5	0	4d.
The Lore of the Honey Bee (Tickner Edwardes)	2	0	3d.
The "Townsend" Bee Book	2	6	3d.
Use of Honey in Cooking (Root)	0	8	2d.
Wax Craft	2	0	4d.

MISCELLANEOUS.

GRADING GLASSES, 1/2, post free.

FORMALDEHYDE, 10 per cent., 8-oz. bottle with full instructions, **1/9**, post free.

NAPHTHALINE, for using in hives as a preventative of infection and the ravages of wax-moth. In boxes, **9d.** and **1/6**, post free.

HONEY TASTERS, in case, 7½d., post free.

APICURE, 1/8, 2/10, and 5/8 per tin, post free.

BACTEROL, 2/6 per bottle, post free.

NAPHTHOL BETA, for use in medicating bee-food, **1/-** per packet, post free. Instructions for use sent with each box or packet.

British Bee Journal and Record Office,

23, Bedford Street, Strand, London, W.C.2.

DAIRY SHOW.

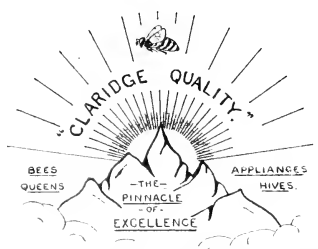
Agricultural Hall, Islington, London, N.

Patron — H.M. The King.

OCTOBER 17, 18, 19 and 20
(Tuesday till Friday).

Great Exhibition of CATTLE, GOATS, POULTRY, PIGEONS, DAIRY PRODUCE, NEW AND IMPROVED INVENTIONS, BUTTER MAKERS' AND MILKERS' CONTESTS, CHEESE-MAKING, POULTRY TRUSSING AND FRUIT BOTTLING DEMONSTRATIONS.

Inclusive Prices of Admission.—Admission on Tuesday, October 17, from 8 a.m. to 6 p.m., 3s. (the Gilbey Hall and the Poultry and Pigeon Department will not open until 1 p.m.); and from 6 to 10 p.m., 2s. On Wednesday, October 18, from 10 a.m. to 6 p.m., 3s.; from 6 p.m. to 10 p.m., 2s.; on Thursday, from 10 a.m. to 10 p.m., 2s., and on Friday, from 10 a.m. to 8 p.m., 1s. 6d. The Exhibition will be closed on Friday at 9 p.m. for the removal of the Exhibits.



F. M. CLARIDGE, Copford Apiary, Colchester.

STEEL'S SUPER CANDY.

4 lbs., **4/8**; 10 lbs., **10/-**; carriage paid.
Special quotations for quantities.
STEEL'S BEE HIVE WORKS,
West Ashling, Chichester.
Branch: The Bee Hive, Broyle Road, Chichester.

The Bee-Keepers' Calendar.

OCTOBER, 1922.

12 Thursday. "Verse, a breeze 'mid blossoms straying,
Where Hope clung feeding like a bee
Both were mine! Life went a maying
With Nature, Hope and Poesy,
When I was young."—*Coleridge*, "*Youth and Age*."

13 Friday. "And, earlier still, was heard the hum of bees,
I saw them ply their harmless robberies."
Wordsworth, "*Hawthorn*."

14 Saturday. "A glorious child, dreaming alone,
In silk-soft folds, upon yielding down,
With the hum of swarming bees
Into dreamful slumber lull'd." *Tennyson*, "*Eleanor*."

15 Sunday. "The bee was sacred to 'Diana of the Ephesians,' whose magnificent temple at Ephesus was one of the seven wonders of the world. Her priestesses were called 'bees,' and the chief priest was 'the king bee.'"
Morley, "*The Honey-Makers*."

16 Monday. "And still I wore her picture by my heart,
And one dark tress; and all around them both
Sweet thoughts would swarm as bees about their queen."
Tennyson, "*The Princess*."

17 Tuesday. "The run of rills, and bubble of bright springs,
And hourly burst of pretty buds to flowers,
With buzz of happy bees in violet bowers."—*Anon*.

18 Wednesday. "Deep, as drops from a statue's plinth
The bee sucked in by the hyacinth,
So will I bury me while burning,
Quench like him at a plunge my yearning,
Eyes in your eyes, lips on your lips!
Browning, "*Women and Roses*."

The Honey Market.

The honey harvest from all sources is now over for this year, and may be put down as an all-round failure, the heather not having compensated for the small takes from earlier sources.

Bee-keepers in this country will have to bestir themselves if they are going to keep their home market. The outlying parts of the empire are sending large quantities of honey to this country, and are preparing to send more. They have also become alive to the fact that it does not pay to send inferior honey, and are catering for table honey rather than for manufacturing purposes, most of the honey from New Zealand being of first-class quality. The Province of Quebec is

also making a bid for the English market, as the following, from "The Times" of September 9, shows:—

QUEBEC HONEY FOR ENGLISH MARKET.

(*From a Correspondent.*)

Mr. Cyrille Lacroix, of Quebec, has arrived in London to negotiate for the disposal of the whole of the large honey crop of the Province of Quebec on the English market. It is proposed that the honey shall be shipped in bulk and bottled by the purchaser in this country. The crop for the year amounts to 15,000,000 lbs., of which 2,000,000 lbs. is extracted and available for immediate shipment.

In March, 1921, the different bee-keeping associations formed themselves into what is known as the Province of Quebec Bee-keepers' Federation, under whose auspices an organised course of instruction in the production of honey is being conducted. The instructors and inspectors are appointed by the Quebec Government, who publish a journal for the benefit of bee-keepers called *Le Rucher Québecois*.

All honey is guaranteed by the Government to be absolutely pure and of first-class quality. The law as to the adulteration of honey is very strict, and all honey found to be impure or adulterated is seized by the Government and destroyed, while the purveyor of such goods is liable to a heavy fine.

This honey, which has found a ready market hitherto on the European Continent, will be retailed at a slightly higher price than the average commodity at present on the market, but the pure quality will justify the price. There are three varieties—white, amber, and dark brown.

Unfortunately for the British bee-keeper the failure this season is a serious handicap in meeting this competition, as there is very little honey to put on the market.

Mr. R. Whyte, who has removed from Cumbernauld, asks us to notify our readers that his address is now: Drumspillan House, Pinwherry, South Ayrshire. Mr. Whyte thinks he has found one of the most favoured spots in Scotland, and one of the earliest. He is looking forward to doing a lot of queen rearing in the future under ideal conditions. We trust he will have good health and success in his new home.

Jottings from Huntingdonshire

Truly the autumn of 1922 will be ever gratefully remembered by bee-keepers. It is not often, in casting up ones notes for the year, a record such as the following can be faithfully written down:—"Chief honey flows May and early June, late September and early October." It has been my comforting experience this Michaelmas time, not only to see empty brood combs replenished, and accompanying combs in the brood nest filled tight with nectar ripened and sealed, but to take off two supers—one of shallow frames and the other of sections. Not it is true, completely filled, but a stone of run and twelve pounds of section honey gathered and stored at a time of the year when one does not, as a rule, dream of surplus is cause for thanksgiving. Needless to say, the source of the honey in the shallow combs being mustard blossom, extraction in the usual way was not possible. By the time these jottings appear in print, most of the mustard bloom will be over, but an unexpected later nectar source is at hand. Clover sown in the barley for next year's crop has so flourished under the continual showers of summer that the sun of autumn is bringing acres of it into flower. One would have thought that first clover-heads appearing in October would be useless as far as the bees were concerned; but I find the yellows are very busy with these purple blooms. A month ago I fully expected 75 per cent. of my stocks would not only need syrup, but several pounds of candy to carry them through until next spring, and now I find that more than half of my stocks have sufficient stores to carry them through till next April if need be. Pollen is being carried in at a prodigious rate, and breeding always means, should impossible foraging weather come along, a serious drain upon the stores, but I do not despair. I can take the precaution of placing a cake of candy underneath the quilts, if not used, it can be utilised in making syrup for stimulative spring feeding later on.

With regard to the possibilities of Hubam, I find what little I have is not ignored by the bees, and I have persuaded a farmer to grow an acre of it for next year, and I hope to have a stock of bees on the spot and note results. There is no question about its usefulness for fodder, and when it is better known, no doubt, we shall see it in most parts of the country, especially where there is lime subsoil. The purity and delicate grace of the flower-spikes is very appealing, and my brethren of the cloth may be glad to know it lends itself admirably to harvest decorations.

The present acute depression in agriculture has driven many farmers to look more favourably on apiculture. I have received many inquiries from agriculturists as to the possibilities of adding a little to one's credit balance by beekeeping. Those wide-awake farmers who have embraced beecraft among their commercial activities could, no doubt, tell of their clover seed being of the best, and their beans, peas and tares being all the better for the visit paid by the bees. I should strongly advise my farmer-beekeeping friends, however, to have bees on the spot. They know at this time of the year exactly which of their fields are to be used for bean crops, pea crops, or clover crops, as the case may be. Legless hives can quite easily be moved from the central apiary to the necessary field and placed in a sheltered spot, well supported on bricks or stones. I mention this because I happen to know a farmer who has some twenty stocks of bees in his garden, which runs parallel with a road. His farm stretches away behind the house for the best part of a mile. On the other side of the road the land belongs to

another farm. Calling there last spring, the man complained that his bees were not paying much attention to his beans. Now, it happened that his bean fields were over 800 yards from his house, while over the road a neighbouring farmer had 26 acres of beans not 300 yards from the bees. I've only to add in addition that the nearer bean crop was also south, while the farmer's own crop was north-east, to convince the merest novice that the neighbour's bean field attracted the bees. It may be said, "Well, the beekeeping farmer got the honey." True! But while he has this advantage, his neighbour has all the advantage of the super-fertilisation of his bean crop, whereas had at least a couple of stocks been right on the spot of the owner's beans, he would get both the honey and the super-fertilisation. As for bees stinging horses, the risk is very slight. Horses uses in harvesting where bees are, are much less liable to get stung by bees than wasps. If a hive was run into or upset, trouble would ensue, but I think that would, in an average case, be less than when a reaping-machine goes sailing over a wasps' nest. One farmer I know has a small apiary right in the centre of his farm, so that, in whatever direction the bees go, they have to fly over his own land. This is wisdom, and one of the delights of beedom is it helps to make us wise, kills prejudice, enlarges the vision, and stimulates one inspiring fellowship.—E. F. HEMMING, Steeple Gidding.

Week-End Bee-Keeping.

By S. H. SMITH, Cambridge.

(*Continued from page* 484.)

It was a glorious afternoon, and I'd have given a "pretty" to have answered the call of the woods and meadows. But at 3 p.m. I was at "D. B.'s" gate, and found him waiting for me. He looked a bit perturbed.

"See here, 'Week-End,' we shall have to do better team-work or the petticoat department will get ahead of us."

"I have not been here for a fortnight, and it was up to you, dear boy. Why didn't you keep your eyes open? Didn't I ask you to look at your bees every morning and evening? It would not have taken you five minutes, and the children wouldn't have got ahead of you."

"And go a bit slow with the 'soft soap,' old man. The 'hot air' you handed out this morning has inflated them so that there is no holding them down. If crinolines were in fashion they'd all be a mile high by now, and still soaring. As it is, they are floating around the house without touching the ground with their toes. What's the game?"

"Ten minutes after you left I was sent down town for books. Now Freda has gone for more. Books were all over the dining-room table. And they forgot all about my cup of after-dinner coffee!"

"Poor man! Is that all that is worrying you? Let us get to work and see if we can't put 'Humpty-Dumpty' up on the wall again."

"Here's the programme. You will make an artificial swarm, leaving the queen and one comb of brood, pollen and honey, and adding three empty drawn-out combs to accommodate the flying bees. All the other combs and adhering bees will be placed on a new stand about twenty feet away. The old bees will be back at the old stand in 24-48 hours, bringing most of the mites with them."

"We will use those two hives you painted so nicely for me. It is lucky I left them under the shed. We will first wash out the brood chambers with chloroform water I brought along, and also mop over their floor-boards."

"Now let us carry them alongside the other hives. You may do all the directing and the work, and I will help to shift and carry the hives. We shall need a wire clearer board to put over No. 3, as we shall place the two section racks over it until they are clear of bees. We can then give them to No. 1 to seal. After that we will put our heads together and discuss remedies, repellants, or poison gases. Go and call the petticoat department while I go for the wire clearer board."

The "D. B." family lined up on the bench, and I could detect no sign of inflation. "D. B." got going, and he did the work well. In two minutes he had found the queen, and after that it was easy. In fifteen minutes No. 2 stood divided and No. 3 had the brood and young bees. My silent, super part was no sinecure, for he ordered me about and made comments in the real old army style. When the worst was over and he was adjusting the quilts and roofs I was glad to subside, still silent, on to the bench by the side of Mrs. "D. B." and daughters.

A little hand slid under my arm and gave it a gentle squeeze, and I heard a little voice whisper, "Oh! Mr. 'Week-End,' isn't 'dad' wonderful!"

There was no need to look down to see which one it was, as by this time I could differentiate between the twins. So I whispered back, "Yes, Daphne dear, your 'dad' and all of you are wonderful." But if I had not been an old bachelor I should have laughed.

Everything had gone like clockwork so far, and "D. B.," coming back from washing his hands, was beaming all over. "Now then, 'Week-End,'" he cried, "trot out your box of tricks and show us how to cure them."

"There will be no lack of cures, 'D. B.' Even if we get rid of all the mites in a bee-stock that would be no 'cure' for this mite trouble. The problem is a very much larger one than that."

I fetched the empty grocery box, costing 2d., in which I had brought the accessories, and placed it under the alighting board of No. 2 to catch any "crawlers" that might come out. I wrote about this simple and inexpensive plan in 1913 in "Intensive Bee-keeping for Honey Production and Disease Control," and can see no use for any more elaborate apparatus.

"Before we start treating the bees it will be best to give them a chance to compose themselves. All we need do at present is to give No. 2 some food. The hive has a floor-board feeder, and I will fill it with this prepared syrup. I will tell you what it is made of later on. First of all I want to tell you a little story."

"In the autumn of 1916 an American entomologist friend wrote that a Japanese beetle had been found in New Jersey, and that he anticipated it would cause trouble. As the beetle was over a quarter of an inch long, and so plainly visible, and as it skeletonised the leaves of trees and its work was thus easily discovered, the problem of its destruction, if it proved necessary, seemed so easy, that I don't remember commenting on the beetle when I answered the letter. Later I looked up the reports on this beetle in its native land, and could find nothing that indicated it was a destructive pest."

"Some time in 1918 my friend announced that 5,000 acres of land were infested by this little beetle, and that it attacked and destroyed over eighty kinds of trees and plants. This looked pretty serious, but knowing that the U.S.A. State and Federal Governments spend money freely in warring against insect pests I did not become interested."

"In 1919 15,000 acres were infested. In 1920 the beetles were spread over 51,000 acres. In 1921, 270 square miles were devastated by it, and this in spite of an expenditure of over £30,000 since 1918 in fighting the beetles. My friend estimated that by 1926 over 150,000 square miles would be invaded by *Popilia japonica* if no effective poisons were discovered before then."

(To be continued.)

A Return to Apiculture.

By HERBERT MACE, Author of "A Book About the Bee."

(*Continued from page* 474.)

Needless to say, I was soon wide awake and dashing hatless into the lane. Sure enough, they were crossing into a neighbouring garden; I ran back and drew a bucket of water. Having no syringe, I simply pitched it over them in as wide a sweep as possible, and without more ado they settled down on a raspberry cane. It was the work of a few moments to shake them into the bucket and put an old curtain over to temper the heat of the sun.

My thoughts then turned in the direction of frames and foundation, of which I had not a fragment. I ran over in my mind a list of bee-keepers in the district, and having fixed on one, living about half a mile away, who I thought likely to have reserve supplies, I started thither, but on the way caught sight of a hive standing in a garden, and remembered that the owner, who had gone abroad for a holiday, had told me that his bees had died, apparently of starvation. I looked up his relatives, with many apologies for the untimely disturbance, and received permission to take anything I wanted from the hive, which I found full of good, clean combs. Six of these I bore off, and having carried down a hive with the combs in it to my five-rod plot, I returned to the raspberry bush, gathered up the swarm, and hived it in good and conventional order. So smoothly did everything work that scarcely two hours elapsed from the time the voices in the lane first came to me till, having lowered the hive-front after the rearguard had gone in, I returned home to tea. It was not a powerful swarm, but covered the six combs completely, and a week afterwards I found them practically full of brood and honey, so perfect had conditions been.

Of course, I sent off, on the Monday, for a supply of foundation and frames, enclosing a sum sufficient to cover what I wanted, and although I expressed a preference for a certain type of frame and section, I was prepared to accept anything that came. I heard nothing for eight days, and then, in reply to a post-card, I received a plea of great pressure of business.

I do not want to defend the bee-keeper who puts off ordering his supplies till swarming time, for the proceeding is indefensible, but I think the dealer—this is not a solitary experience, of course—has no excuse for this kind of thing. He knows that rushes may occur, and he ought to be ready for them. His goods are stock lines, and nothing has to be made to order. Indeed, they could be made up in packets, which would only need a label before sending off, and surely it is possible to book, in advance, temporary services which could be called upon in an emergency. Just as the post office expects a rush at Christmas and knows where to get the men to cope with it, so I think the bee-appliance maker might make arrangements in advance for meeting the honeyflow rush which he knows is likely to come. If this catches the eye of the dealer in question, I hasten to assure him that I suffered no loss or inconvenience, and do not write out of malice, but because I think the trade in general ought to make provision for these rushes. If nothing more can be done, I would suggest having a few postcards printed: "Your esteemed order with cash £—— has been received, and will be dealt with at the earliest possible moment." This would ease the mind of the waiting bee-keeper to some extent. The postage on such a card is now only a half-penny.

Anything may happen during the swarming season, and the smallest reputation for ability in handling bees will soon bring a shoal of bee-keepers, or rather "people who have bees in their gardens," around for advice and assistance.

The day following the eminently satisfactory events just recorded, I was, fairly late in the evening, busy on my allotment—I have acquired an additional twenty rods now that the first wave of enthusiasm for allotments has receded and made it possible for those who really want land to get it—when I was fetched home by my daughter, a frantic neighbour, who has bees and is terribly afraid of them, having besought that I would go and catch a swarm for her. Here, again, there

was no difficulty, for the swarm, quite a big one, of five or six pounds, had accommodatingly and gracefully attached itself beneath a rustic archway, from whence the whole mass was dislodged at one shake. Having seen this lot well on the way into their new home, I left it for the night, and the following day moved the old stock away, let down the front of the new hive, and put it on the old stand. These were started on ten combs, and in a fortnight had very nearly filled and sealed them all. It is understood that I am a partner in this swarm, and the produce is to be divided on a fifty-fifty basis.

After two or three days of freedom from interruptions of this kind, another timid lady knocked at the back door and asked for help This I found was a small swarm on a gooseberry bush. Having very little time to spare and the position being very hopeful looking I thought I would put the brood chamber, ready prepared, underneath the swarm and shake it directly into it. A hive was ready, but the combs were scattered in various places, taking some minutes to get together. I had, as a matter of fact, to fix a sheet of foundation in one, and I had just got this in the frame when, without warning, the swarm took to the air. Hastily I picked up the garden hose and turned the water on, but it was of no avail, and the bees rose over the garden wall. By the time I had gone round -this wall is ten feet high—they were advancing across the next field. They moved slowly, but in the inevitable straight line, a seven-feet fence having to be scaled into a private garden in order to keep them in sight. Carefully picking my way over immaculate flower beds, I crossed the garden and the next wall—higher than the first. Thence the way was down a field of newly-ridged potatoes and into a field of mowing grass, the proceedings being varied by flinging handfuls of dust over the swarm, without avail. In the mowing grass I could only follow, but, fortunately, the swarm seemed to hesitate a little here, and after scouring round a bit I found a heap of loose soil, with which I bombarded them freely, with the result that they began to turn in towards an oak tree standing in the hedge by the field side.

At this juncture I was hailed by a man carrying a sack, who yelled: "Have ye seen a swarm o' bees comin' along 'ere? They belongs to Blank the butcher." I replied that I was at that moment watching them, whereupon he made off without another word, *carrying the sack with him*. This reminded me that in my haste I had come unprepared with anything to put the bees in, supposing they settled, for I had neither hat nor coat. I climbed up the bank to the roadside to see if there was any friendly soul in sight who would fetch a box of some kind, but not one was to be seen, though normally the road is crowded with passengers of all sorts. There was nothing to do but go back and fetch a skep, so having seen the swarm snuggle down out of sight in the hedge, I judged it safe to do so. Ultimately I secured them, but I had wasted the better part of two hours, for the sake of trying to save a few minutes.

(To be continued.)

Jottings from Ashdown Forest

Legally, for a long time past, it has been, and still is, *Summer Time*.

Apparently it is *not* in Ashdown Forest, Sussex, or even the South of England, where any duration of summer weather has been absent; and now we cannot reasonably expect to get a summer to procure surplus honey. Although, as per Rev. Hemming's contribution (page 435), there is everywhere an abundance of things in flower, yet bees are starving. Generally, I find abundance of bees and brood, *mostly very vigorous and marvellous in their feeding abilities;* very few stocks have enough honey to carry them through another fortnight if it should continue wet or non-productive of honey. Honey in sections is very scarce, straw caps on skeps I have nowhere found one any good, honey in new shallow combs is likewise absent—in fact, it is very few new combs I have anywhere seen. Shows have gone by, but no honey exhibited. One would almost think, to read the newspaper reports, the beekeeping people or prizes offered for honey didn't exist. I am disappointed and disheartened, but many people seem "fed up" and disgusted with bees. Such a lot of swarming, and no honey. Those who, like myself, hope to live and try again, there is some ray of hope for. The numerous stocks can be united up, any useless combs being melted up for wax, the empty combs carefully stored, proof against mice, moths, damp or mouldiness. If one has several W.B.C. hives there is no better way of storing combs than using them piled up high with spare lifts from other hives, tacking perforated zinc over the entrance and inside of roof ventilating holes. Brood and shallow boxes and section racks can be stored. A stump driven in ground one side, to which tie a cord, pass over the roof, and tie a brick to swing well clear of the ground; they are then safe to the spring, or easily got at if needed. No need to untie the brick. The same applies to any hives in exposed positions.

Known excessively vile-tempered, or otherwise not desirables, should have their queen destroyed, or she might destroy a desirable queen. None showing any sign of disease should be added to a desirable stock, or any of their combs stored. Combs with only a small quantity of pollen may be stored, and the bees will clean them; but if much pollen and no honey, best be melted up. The stocks, quickly fed up with syrup to required amount, should then be left till January or early February before giving candy, otherwise they are too active, probably breeding, and consume their store.

Last autumn I mentioned I had bought a lot of foreign honey to feed up with after diluting and boiling; had to "wait and see" as to result. The result was my bees were too busy carrying it down from rapid feeders (holding half a gallon each) to trouble about being robbed. Consequently, what I thought to be bees going and coming with water was really other people's bees coming and going with my honey; apparently mine fetched it

down, and others carried it away, hardly any getting sealed. I then resorted to candy, but several died from starvation before Christmas. No more feeding up with honey for me.

Queen Excluders.—For many years I have only seldom used them for their intended purpose. If a queen gets up in sections, they are good to put in other racks to induce the bees to come up. When the brood is hatched and sections filled with honey, it is extracted, the combed sections are then used for heather, the combs then being cut out and put into honey press. Some shallow combs get filled with honey, others brooded are taken to help weaker lots. Only in cases where people have shallows with drone combs, or where they take the honey themselves, and might lose the queen, do I use them; but they are handy to lay up to alighting board when shaking bees down in front; it saves a lot of looking for the queen, as, if shaken down, she can be easily seen on the excluder.

It is now three weeks since the above was penned, and got mislaid. The bee time or time for bees has not improved. Some have succumbed to starvation, some have been fed in the nick of time; but strong stocks being with no store, with September gone, the bees of the country will need many tons of sugar to have any chance of wintering safely. For myself, my honey cupboard has only 12lb. in, with no more to come—a very poor outlook, with at present 40 stocks. Drastic reduction by uniting and storing combs must now take place, hoping strong stocks may yet get a good bit from ivy. Selling bees is out of the question; bees will probably be more scarce in spring owing to losses by starvation than has for years been the case through disease or inclement weather. Those that can afford to feed abundantly while bees are active on ivy have a chance of success, but later feeding in any form is a poor chance.

Mr. Snelgrove's method of queen introduction should be much appreciated, and, not forgotten, it is really simpler than my own method. It is many years since I possessed a queen-cage. All queens being put in a matchbox, a little honey dug out from the top of the hive smeared over the queen with a stick sharpened thin, she then put through feed-hole or between the combs. She is not allowed to escape from the matchbox till smeared. Sometimes she may be a bit lively.

October 2, 1922. A. J. RIDLEY.

U.S.A. Government Bulletins.

Messrs. Burtt & Son, Stroud Road, Gloucester, write us :—

"We are now sending out a circular giving particulars of the bulletins issued by the U.S. Government, and we should be glad to send this to any who would be interested to know of the bulletins. We are, for the present, at any rate, making no charge for this. Anyone who will send their name and address can have this sent to them.

"The circular is just a notification of the fact that such-and-such bulletins have been published. We are also willing to supply the bulletins if required, and are charging them at or about cost price. The 3d. ones are published at 5 cents.

"October 5, 1922."

British Bee-Keepers' Association.

Lecture by MR. D. WILSON on "Comb Honey Production."

(*Continued from page* 487.)

WARMTH.

One reason for bees refusing to take to sections is that at times they are not sufficiently well wrapped up, are cold and draughty. See that they are packed well all round the sides of the rack and particularly over the top.

Besides the quilt there ought to be several thicknesses of good carpet felt well packed down, or even a layer or two of old newspapers. I do not think that bee-keepers realise quite enough what a wonderful non-conductor of heat is paper—a layer of newspaper being quite equal to a blanket. One thing I would like to protest against here and now is to find, as I often do, that for the sake of keeping in this warmth, the hive has become the receptacle for every kind of cast-off clothing discarded by the family. I fail to see what use they can make, for instance, of a pair of left-off trousers. This method of using old clothes is certainly untidy, and may, I believe, even be unsanitary. If such stuff must be used, surely a few minutes with a pair of scissors cutting it into decent squares to fit the hive, will be well repaid by the additional neatness obtained, if by no other result.

Often bees refuse to enter sections, or, when already in, send off a large swarm, leaving the section rack denuded of bees and all hope of a return from that hive gone for the time. Possibly never again that year will the colony be in condition to enter sections and do their work there. This liability to swarm is the bête-noir of the apiculturist, but it must be faced, and many are the tricks advocated to overcome it, or to make the best of a bad job when a swarm does happen to come off.

The method of hiving the swarm on the old stand and moving the colony away to some distance, then placing the sections upon the swarm, is an old one, and known to most bee-keepers. In this way the swarm gets the advantage of receiving all the flying bees and carries on with the work of filling the sections almost as if nothing had happened. Besides, the swarmed bees are in the best condition for producing comb, having left the hive, ready to make a new start in life, which start necessitates in their natural life first of all the production of comb.

But I would like to sound a note of warning here, although it has perhaps nothing to do with the production of sections. What

about the swarmed stock, denuded of all its flying bees? There will not be sufficient left to keep warm the brood, therefore I advocate that a few combs containing brood but no bees, and no queen cells, be left upon the old stand. These will help to keep the hive going as they hatch out during the interregnum of three weeks without young bees, which would naturally follow the hiving of a swarm.

QUEEN EXCLUDER.

It is absolutely essential, in my opinion, that some sort of queen excluder be used if sections are to be produced. There is always the danger that the queen will enter the rack and spoil the lot so far as selling is concerned.

Shall we use full sheets of foundation or merely those triangular starters which I have seen sent out by firms of appliance makers? I vote each and every time for full sheets. Not only is it a saving of time to the bees to have no comb to make, but merely to draw out foundation, but a better shaped and better filled section is the result, and one kind of comb only is assured. There is a danger, if bees be started with just a bit of worker comb, that they will fill the rest of the section with drone comb to save time, or perhaps as a natural outlet for their desire to build that kind of comb, and what looks worse than two sorts of comb in a section? For the production of comb honey to-day the bee-keeper makes use of an American dodge, the folding section, a piece of wood—bass wood—about 17in. long and 2in. wide by 1-12in. thick, which can be folded into the shape of a hollow box 4¼in. by 4¼in. by 2in. wide, which, when full of comb, weighs about 16oz. This can easily be folded by hand, but the operation is more expeditiously performed if a hollow box is used, just the size of the outside of the section. The section folds easily along three deep V grooves, cut almost through the sides. Before folding, especially in dry weather, when the wood is inclined to be brittle, it is advisable to damp them by laying over the joints a damp cloth and allowing the moisture to soak into the wood, when they are more easily folded into shape.

Whilst the folding is being done, the foundation should be fixed into position. If sections be chosen which have a groove down the sides, the foundation will more easily slide into position, but it should not be allowed to drop into the bottom of the section, but should terminate at about ¼in. from the wood, thus allowing room for the wax to stretch when being drawn out into comb by the bees, and allowing, too, a pop hole or two by which bees may pass from one section to another. The ordinary rack for sections is designed for the purpose of holding twenty-one, seven rows with three in a row. Between each row should be placed a fence or divider, so as to keep each row and each section separate from the other. To end the whole a small board 4¼in. by 12⅜in. is pressed up and wedged into position so as to push up the whole of the sections quite tightly together.

TAKING OFF.

A word must be said about taking the combs from the hive. This should be done with the minimum of disturbance of the bees and avoiding as much as possible the use of smoke. If bees be smoked, their tendency is, as we all know, to rush to the combs and gorge themselves with honey. Perhaps the cappings of the combs will be torn off, thus spoiling good specimens of sections. I advocate the use of a super-clearer for this purpose, when the combs can be taken off without difficulty. Nor should strong carbolic acid be used, or there is a danger of tainting the sections.

Another point. Don't leave sections on the hive for a day after they are sealed. There is always the danger of the bees giving a second capping or glazing them over and varnishing them, thus again spoiling their appearance. Besides, if a bad time comes along they may even take down the honey for their own use. No one begrudges them the food they have worked so hard to obtain, but in such an eventuality as the one mentioned, sugar syrup is cheaper than choice sections, and just as efficacious.

Although the manipulation of sections after they are removed from the hive belongs rather to another branch of the subject than that of mere production, yet I may be allowed to say that they should be immediately cleaned up by the use of a cabinet-maker's scraper, so as to remove any blemishes upon the face or edges of the wood. And in this connection, please handle them carefully. Some years ago I met with a serious reproof from my friend, Mr. Sleight, when on the moor. We had taken off a few sections, and were cleaning them up a bit just previous to packing them for transport. I thought I was careful. In fact, I was. But Mr. Sleight told me that I should have to be far better if I was to work alongside him. A true lover of a fine comb of honey will handle it far more carefully than the connoisseur of old china handles his beloved pottery.

Herts. Bee-Keepers' Association.

Upon one of the sunniest Saturdays of the year, sandwiched in amongst days of indifferent weather, the Herts County Bee-keepers' Association held their Annual Summer Outing in the spacious grounds of Hatfield Park (by kind permission of the Marquis of Salisbury), on August 26, when a large attendance of members and friends foregathered to give welcome to the Editor of the *Bee World*. The meeting to hear the lecture by Dr. Abushady, was held under the spacious trees that adorn the magnificent avenue leading to Hatfield House, and Dr. H. E. May (of St. Albans) occupied the chair.

In introducing his subject, "Some Interesting Observations," the lecturer pointed out that a justification of the title of his lecture was necessary, and so he dwelt upon *the need for observation* by the rank and file of beekeepers. Such a thing

as knowing beekeeping from A to Z, he pointed out, did not exist except in a comparative sense. What we all know is not more than a fragment compared with what we do not know, and there is no reason why we should not exercise our eyes and our reasoning, no matter to what extent we may be absorbed in the £ s. d. aspect of beekeeping, or be backed by the existence of research bodies. He emphasised, however, that there were three essential *qualifications for correct or scientific observation*, namely: (1) Knowledge of the subject; (2) Absence of prejudice; and (3) Experimental training. He elaborated each of these points, and then presented the gathering with a series of interesting observations of practical and scientific value (most of which are original) in relation to such important subjects (amongst others) as comb-building, consumption of food, supercedure queen-cells, swarming, queen-balling, crawling of bees—all of which, it is hoped, may be recorded at length in the *Bee World* for reference, and thus make them available for the benefit of those who were not able to attend the lecture, which was most attentively followed, as evidenced by the numerous questions that followed, and the keen appreciation which was voiced by all those present.

The meeting concluded with a few well-chosen words by the Chairman.—F. E. L. WATTS, Hon. Sec.

Derbyshire Bee-Keepers' Association.

The Annual Show of the above Association was held in conjunction with the Derby Agricultural Show on Wednesday and Thursday, August 16 and 17. The unfavourable weather conditions made the number of entries rather low, but the quality of same was consistently high. Mr. G. Hayes, of Beeston, judged the exhibits, and his awards, which gave general satisfaction, were as follows:—

Class 1.—One jar of extracted honey: 1 Rev. H. R. N. Ellison.

Class 2.—One section: 1 Mr. J. Pearman.

Class 3.—Display of Honey: 1 Mr. J. Pearman.

Class 4.—Six jars of Light Honey: 1 Mr. J. Pearman, 2 Rev. H. R. N. Ellison, 3 Miss Briddon.

Class 5.—Six jars of Dark Honey: 1 Mr. J. Pearman, 2 Mr. A. Dakin, 3 Mr. A. A. Chapman.

Class 6.—Six jars of Granulated Honey: 1 Mr. J. Pearman, 2 Rev. H. R. N. Ellison, 3 Mr. G. Bartle.

Class 7.—Six sections of honey: 1 Mr. J. Pearman, 2 Rev. H. R. N. Ellison.

Class 8.—One shallow frame: 1 Mr. J. Kirkland, 2 Mr. A. Dakin, 3 Mr. J. Pearman.

Class 9.—Wax: 1 Mr. J. Pearman, 2 Mr. A. A. Chapman, 3 Mr. J. Kirkland.

Class 10.—Cake of Candy: No award.

Class 10a.—One Shallow Semicomb: 1 Mr. H. W. Slack.

Class 11.—Six Sections (Novices): No award.

Class 12.—Six jars of Honey (Novices): 1 Mr. S. Owen, 2 Mr. H. W. Slack, 3 Mr. A. Dakin.

Best beginner's outfit: 1 Mr. S. Harrison.

The Cup presented by W. E. Ann, Esq., was won for the third time in succession by Mr. J. Pearman, and same now becomes his property. In addition, Mr. Pearman also won the Association Silver Challenge Cup for the highest number of points.

The Novice Cup presented by W. St. A St. John, Esq., was won by Mr. H. W. Slack, who also obtained the Apis Club Silver Medal awarded in the Semicomb Class.

(*Communicated.*)

Wanted, an Excluder.

[10701] "Scrounger" (10693) is mistaken in describing the slips of wood I recommended to "Experientia Docet" as a "botch up." They are perfectly satisfactory and workmanlike. I tried his suggestion of strips of American cloth long ago, but found them a perfect nuisance, as the bees bite holes in them, and they are unsatisfactory in other ways.

The present attitude of the suppliers of appliances won't do. "Scrounger" ridicules a suggestion I made to enable beekeepers to avoid purchasing a new outfit of excluders. You recently published a very unconvincing letter from a manufacturer, the burden of whose song was that we were to bustle round and raise big colonies and get plenty of good honey, and then we should easily be able to pay the manufacturer his war-time profits.

With a view to stimulating the somewhat languishing market for their wares, the manufacturers have discovered that the hives they have hitherto supplied to beekeepers make it impossible to expect really successful harvests, and exhort us to scrap all our equipment and take to new and strange sizes of frames. And some people seem to believe them.

This sort of thing doesn't help the beekeeping industry, nor does "Scrounger's" offer of excluders at 2s. each and frames at 21s. a hundred (pre-war prices were 10d. and 8s.). Our case as honey producers is easily put. The market is being flooded with foreign honey at as low as 6d. a lb., which the undiscriminating public is buying in preference to our product, and if we are to compete with this imported stuff we must be able to get our appliances at a reasonable price. When sellers of appliances assimilate this obvious truth, they may be willing to reduce their prices, and so benefit themselves as well as us, for they would find a large increase in their turnover at lower prices.

"Scrounger" says he will be pleased "to supply anybody with excluders, or anything

else *for their hobby.*" He is quite right; it is only people who keep a hive or two as a hobby for supplying their own table, and don't mind what the honey costs them, who can afford to run to the dealer for everything they want so long as the dealer thinks that he alone amongst business men should continue to reap war-time profits.

When beekeeping becomes not merely a hobby, but a minor industry fairly certain to be profitable, appliance dealers will benefit far more than they do now under their artificially maintained prices, which check the sale. Meanwhile, we buyers of appliances should buy as few as possible, and make old things do, and use a couple of slips of wood with the old 10-frame excluders rather than buy new 12-frame excluders.

October 7, 1922. B. WRIGHT.

Hubam Clover.

[10702] I question very much if Hubam clover is suitable for our climate. I have it about 4 feet high, but have had very little flower and very few bees on it. Having some seed left, will try it again.

What a lot Rev. E. F. Hemming puts in a small space. In September 28, p. 471, he asks is sugar syrup plus light clover honey, well mixed, fed rapidly to the bees, and afterwards extracted and bottled, water-white honey (not always water-white). Does he know something? Mr. Wilson, page 486, refers to the late Mr. Alexander adding water to honey to produce sections. I do not think that method is honest, and I think, in the interest of our craft, the least said on this question the better. I thought this a thing of the past, but I am afraid not. I have a sample which never has, or ever will, granulate. I also have on my file a bit of paper saying it is part —— honey, and the remains from the —— bag.

Now, Sir, what is wrong with our bees, as they are not sealing the food as they should do. There is a large field of clover in bloom less than a quarter of a mile from my apiary, and the field is alive with bees (October 3), yet they are not sealing it up.

J. PEARMAN.

[We have noticed the bees are not sealing stores, either honey or syrup, so well as one could wish, and have put it down to the cold, damp weather. Has any other reader anything to say on the subject?—EDS.]

[10703] Having just read in THE BRITISH BEE JOURNAL of September 28 the letter of Mr. H. Hall re Hubam Sweet Clover, asking for readers' experiences re the same, allow me to give mine.

A brother-beekeeper sent me a small packet free last spring which I sowed very carefully about mid-May in my garden. The plants grew very well from the start. Now they measure from four to five feet high; but not a bloom did I see on them before September 1, and not very many now. In my opinion, it is no good for bees unless it blooms earlier. Of course, we must take into consideration the exceptionally wet summer.

As for animal fodder, it is not much good, unless we cut it very young, for the stems are too hard and woody, and as it grows up the lower leaves drop, and for about two feet from the ground there is nothing but the bare stalks. They look just like young willows, and they are just as hard. Some of them measure half an inch in diameter at the bottom. I think a mower would have a hard job to cut them as they are now.

I also would be very glad to have the experience of others re Hubam Sweet Clover.

T. MORRIS.

Clipping Queen's Wings.

[10704] I thought that clipping a Queen Bee's wings—re Mr. Smith's Week-End Notes—was one of the latest things in checking swarms, but I find in Virgil, Georgics 4, 155-60:—

"But when the swarms are eager of their play
And loathe their empty hives, and idly stray,
Restrain the wanton fugitives, and take
A timely care to bring the truants back.
The task is easy—but to clip the wings
Of their high-flying arbitrary Kings!
Truly there is nothing new under the sun.

(Rev.) G. GRYLLS.

QUERIES AND REPLIES.

The Snelgrove Method.

[9943] I would like to ask if Mr. Snelgrove finds his method of queen introduction satisfactory when introducing queens from abroad, and which therefore have not been ovipositing for some days.—B. BLACKBOURNE.

REPLY: We sent this query to Mr. Snelgrove, who replies, "The Snelgrove method is quite suitable for newly-arrived imported queens: in fact, it works in all ordinary circumstances of fertile queen introduction. I know of no exceptions."

Disinfecting after Acarine Disease.

[9944] As a regular reader of your worthy paper, the "B.B.J.," will you kindly answer me through your "Notes and Queries" the following? I have lost all my bees from Acarine disease, twenty stocks. Is it necessary to disinfect the ground around the boxes; if so, with what? I have a good supply of shallow and standard combs drawn out. Can I use same again for driven bees, or can I disinfect them, and with what?—BENJ. DAVIES.

REPLY: It is advisable to disinfect the ground. Sprinkle it thickly with quicklime—ordinary builder's lime—and if possible dig it over. Fumigate the combs with sulphur fumes.

Notices to Correspondents

H. B. (Horsham).—*Candy not setting.*—You have probably not boiled the candy sufficiently. It will not do to put it on the hives unless it is properly set, or it will run through on to the floorboard. Better add a little more water and re-boil it. If re-boiled without adding more water it will probably be too hard. Try testing by letting a drop fall into a cupful of cold water, and immediately try if it can be rolled between the finger and thumb like soft putty. When this can be done it is boiled enough.

F. S. E. (Ipswich).—See Queries and Replies.

Honey Sample.

"GLOSTERSHIRE."—The honey is fairly good quality; its fault is a lack of density. The colour and flavour are good. It is from mixed sources, clover, fruit, and a little lime. There is no "predominant" flavour.

Suspected Disease.

R. T. (Leicester), E. Cazalet (Suffolk).—The bees were suffering from acarine disease.

Bee Shows to Come.

November 16, at Beverley, in connection with the Beverley and District Chrysanthemum Society's Show. Open Classes.—Schedules from T. T. Taylor, Hon. Sec., Beverley and District B.K.A., 137, Keldgate, Beverley.

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THE World's Famous Raspberry, Lloyd George, perpetual fruiting, 10s. dozen, 60s. and 70s per 100.—J. J. KETTLE, The Violet Farm, Corfe Mullen, Wimborne, Dorset. h.78

WANTED for the Continent, a Queen Breeder, methodical and capable of working to schedule time in producing queens in quantity; single person of either sex.—Apply, giving references, to Box 95, BRITISH BEE JOURNAL, 23, Bedford Street, Strand, W.C.2. k.2

FOR SALE, owing to death, twelve stocks of Bees in first-class Hives; ample stores; price £2 10s each, including bees, hive and section rack.—SIMMS, 81, Bushey Grove Road, Watford. k.29

COWAN'S EXTRACTOR, Ripener; all appliances good; practically new; obliged to discontinue bee-keeping.—MRS. D. M. STANCLIFFE, Middleton, Pickering. k.21

SELL.—Two small powerful Acetylene Brass Head Lamps, with separate generator, suitable light car or cycle car, £3 the set; carriage forward.—HERROD-HEMPSALL, Old Bedford Road, Luton, Beds. c.77

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THE WISE BEE-KEEPER looks for quality. The South Hampshire Apiaries breed only from the very best strains. Result: Quality and satisfaction. Beginners' Outfits from £5.—All communications, H. E. NEWTON, New Milton, Hants.

HONEY FOR BEE FEEDING.—Australian, new, 60-lb. tin, 35s.; West Indian, new, 56 lbs. 38s. 6d.; Californian, old crop, 60 lbs 30s.; carriage paid; reduction quantities; samples on application.—LONDON TRADING AGENCY, 32, St. Mary Axe, London, E.C.3. r.k.30

SAVE YOUR BEES.—Incomparable "Cotswold" Candy; 4 lbs., 5s.; 7 lbs., 7s. 6d.; 10 lbs., 10s.; 28 lbs., 27s.; carriage paid.—BOWEN. k.22

CLEAR BOTTLES; all shapes and sizes; rock-bottom cash prices.—BOWEN. k.23

BUY NOW.—Honey Tins, all sizes; quotations. —BOWEN, Coronation Road, Cheltenham. k.24

CANDY! CANDY!! CANDY!!!—4 lbs., 4s. 9d.; 7 lbs., 7s. 3d.; 10 lbs., 10s.; 28 lbs., 26s.; carriage paid; pure cane sugar (white).—HENSLEY, Luton Apiary, Chatham. k.25

CANDY, 4 lbs., 4s. 6d.; 10 lbs., 9s. 9d.; larger orders, 9d. per lb., f.o.r.—COBB, 33, Bevan Road, Plumstead. r.k.26

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WINTER CANDY, medicated or plain, from pure cane sugar; 4 lbs., 4s. 6d.; 7 lbs., 7s. 6d.; 10 lbs., 10s.; 28 lbs., 26s.; post free.—STONE & CO., Wilson Street, Bristol. k.28

HONEY FOR FEEDING, in 60-lb. tins, 30s.; free on rail.—HARVEY, Apiarist Andover. j.68

FINEST AUSTRALIAN HONEY, feeding our own apiaries on it, 28s. per 60-lb. tin.—THAMES VALLEY BEES (Regd.), Teddington. j.79

QUEENS. — PRYOR, Breachwood Green, Welwyn. r.k.13

FEEDERS.—A new pattern, slow or rapid, 3s., post free, 30s. dozen, carriage paid, with instructions for candy and syrup making.—MEADOWS, Syston. k.10

HONEY, in 28- or 56-lb. tins, finest quality, for Sale.—HARVEY, Apiarist, Andover. r.k.15

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ITALIAN QUEENS by RETURN OF POST. Tested, 9s. 6d.; Untested, 7s. 6d.—PEARSON & GALE, Marlborough.

BEES are working on this now—Hubam Clover. The wonder honey plant.—R. STEELE & BRODIE, Wormit, Fife. k.9

EX-SAPPER writes 29/9/22 *re* Fakenham Queens: "Spring count 5 colonies (queens introduced June, 1921). One gave 142 lbs. surplus, no swarm. Four worked also for increase, make final 1922 results, 17 8- and 10-frame colonies for wintering, six 10-frame colonies, and three 4-frame nuclei sold, and 5 cwt. of surplus honey. Not six stings from your strain the whole season. Your ten 1922 queens supplied are doing well. Please book me 50 1923 queens." Where in Great Britain this season has that been equalled by any other race or strain of queens and bees? It spells good bee-keeping, exceptionally good bee-keeping, good queens, and the first-class bees only real good queens can ever produce. All were faced with a bad season, *just like yours.* Not bad, is it? k.18

ATKINSON'S FAKENHAM QUEENS plus ex-Sapper's care and attention account for the foregoing little lot. My Queens will yet be in supply until mid-October, or while they last; quite young, pure Italian strain, price 7s. 6d. each. ATKINSON, Fakenham. k.19

LONDON DOCTOR breaks into holiday hours and writes from Austrian Tyrol, 4/9/22, a striking appreciation of Atkinson's Queens (the Fakenham sort). Has tried out many others queens, and in a significant phrase adds he is "clearing them out." Too late this season to publish full details. See "B.B.J." columns next spring. k.19

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TO ALL SECRETARIES and BEE-KEEPERS.—Send to me for samples of Honey for autumn feeding.—F. GOODRICH, 10, Weston Park, Crouch End, London. h.106

STRICTLY BUSINESS.—6 lbs. Flavine—S. B. Candy, 7s.; 10 lbs. Flavine Honey Sugar, 10s.; 10 lbs. Autumn Sugar Syrup, 8s.; all carriage paid to any address in Great Britain.—S. H. SMITH, 30, Maid's Causeway, Cambridge. h.23

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"WIGHT" AND "ACARINE" DISEASES.—Prevention and removal; invaluable advice; 5s. 6d. "An eye-opener."—ALF. RYALL, 6, Ospringe Road, N.W.5. r.c.87

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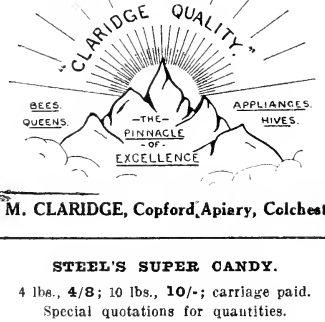

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The Bee-Keepers' Calendar.

OCTOBER, 1922.

19 Thursday. "Cease, mother-land, to fondly boast
Of some far off who strive and thrive,
Forgetful that each swarming host
Must leave an emptier hive."—*Whittier, "The Homestead."*

20 Friday. "The birds refused to sing for me—all things
Disowned their old allegiance to our spells;
The rude bees pricked me with their rebel stings."
T. Hood, "Midsummer Fairies."

21 Saturday. "I have been in the meadows all day
And gathered there the nosegay that you see.
Singing within myself as a bird or bee
When such do field work on a morn of May."
E. B. Browning, "Irreparableness."

22 Sunday. "The Grass comes running up
To kiss her coming feet;
Then cease your grumble, Bee,
When I my Lady meet."—*W. H. Davies, "My Lady Comes."*

23 Monday. "Drones that laugh at honest toil, and reap
Where others sowed."—*Virgil, Georgics, Book VI.*

24 Tuesday. "Or earliest ripening
Prince-Harvest apples, where the cloyed bees cling
Round winey juices oozing down between
The pickings of the robin."
J. W. Riley, "When June is Here."

25 Wednesday. "What is more gentle than a wind in summer?
What is more soothing than the pretty hummer
That stays one moment in an open flower
And buzzes cheerily from bower to bower?"
Keats, "Sleep and Poetry."

Seasonable Hints.

Stocks of bees should now be packed down for the winter. The few warm days we may get will enable them to close up all spaces under the quilt and so prevent a draught through the cluster. Although the weather is much warmer than it has been for some time, syrup feeding should cease, as the bees will not be able to seal it over.

Owing to the cold weather stores have not been sealed so rapidly or thoroughly as the bee-keeper would like, and the suggestion made by Rev. E. F. Hemming in his "Jottings" is useful to those having only two or three hives, that is to supply artificial heat, either a hot-water bottle, a hot brick or other device. Whatever is used must be well covered, preferably with flannel. Of course this procedure is quite out of the question for those having a number of hives. If any stocks need more food, candy must be

given, but it will be well to fix up the hive for winter, not forgetting to give winter passages over the tops of the frames, and make provision for putting on a cake of candy later on when the weather is colder. If put on now the bees will convert it into syrup and store it in the combs.

Bees are still moving on fine days; some of ours were carrying pollen in freely last Sunday. On these warm days there is still a danger of robbing, so entrances should not be opened too widely.

A Dorset Yarn.

Many enthusiastic bee keepers came to me at the Great Fruit Show of the Royal Horticultural Society in Holland Park last week. The guide-book showed them that the Violet Farm was represented there. Each of the four days some readers of the JOURNAL made the time pass away pleasantly. There are many bee-keepers who are expert fruit-growers. Only one of them decried the usefulness of bees in pollination; he argued that so many flowers open at one time there could not be enough bees to visit them all; he also argued that bees only work in sunshine, yet the north sides of trees gave just as much fruit as the sunny sides. There, I venture to state, he made a wrong statement, as when trees bloom there is not the wealth of leaves to keep the sun off the blossoms on the north side. He made a wrong deduction in my opinion. Though an excellent grower and a bee-keeper for many years, he is the first one I have met that argues that pollination does not depend on bees.

A big, fine figure of a man, an excellent speaker, he argued that the stigma was only susceptible to pollination such a short time, which is perfectly true. One of the other bee-keepers from Co. Antrim, Ireland, said: "Shure now, then how do they get pollinated?" The answer was, "By wind." The quick-witted Irishman was eager to know "what happened when the pollen was wet?"—"no pollination." What happened when there was no wind? The answer again come, "No fruit." "You're wrong, because there is always fruit in Ireland."

It was good to meet bee-keepers from the East Coast of Scotland, from Cardiff and Newport, from Staffs and Warwick, Hereford and Gloucester; some with handles to their names, most without, but all enthusiastic; even the clever one who argued against pollination was well pleased with the results he had from the surplus honey. All were full of enthusiasm for the craft.

Visitors from Hants and Berks came this week both on the same day, and one from the land where the shamrock grows.

The Bracknell and District B.K.A. are doing a good work; the young secretary had not made a success with all his Italian queens, but was not at all downhearted. He united the queenless lot to those that had taken the new ones. A lot can be written of results of new queens. One hears of poor results so often, yet others write of sure results without any trouble; others try to follow as they have started, and the results are not successful. Still, we come through with some strong stocks, and can still carry on with our bees year after year; but it seems that it is better to re-queen before the drones are destroyed, we can then have them mated if they should be virgins.

Our last lot of standards that were taken off the last week in September had the whole lot filled with honey but they were not all capped; they had brood in them. When the main lot was extracted, the lower lot had quite a lot of young uncapped larvæ in the centre. Shall do more with standard combs another year for extraction. They are soon filled, and after extraction can be used again, and they are ready for early surplus in the following May, as, being already drawn out, bees can soon repair and start filling at once. The only thing about them is they must be well wired; they are best with wire across the width, and an angle wire from near the bottom bar up to the centre of top wire and pulled down firm to the bottom of other side. This angle wire keeps the combs more rigid in extracting. If the wires are only from right to left, the combs, as they revolve, are apt to break along the wires. Another reason why these are best also is, you can give the unsealed combs to colonies that have not enough in the lower brood chamber. We must leave them sufficient stores to tide them over. We have often found our most productive colonies with a light lot in the lowest brood-box. Those that have only one brood-box always keep a good band of stores below the top bar, with plenty in the angles; but those queens that fill two boxes with brood do not always lay in stores so lavishly, but fill up the lowest lot with late brood. If these are left short after taking off surplus, the colony must go under if not fed. We think that these unsealed combs make the best food for them.

A late lot of shallows were taken off in October. We use them for the table ourselves. If these have only one wire from right to left it can be cut and drawn out, and the new comb is as good as sections. The honey is always very thick, and never runs out of the cells in cold weather when it is cut across for use. Visitors to the farm in winter speak highly of these clean, long shallows when used for tea. If wire is cut one side, the other side not, it will draw out of the centre after knife is run round the whole.

On Friday, the 13th, we had a warm southerly wind, and bees were flying far from the hives; they were on ivys and perennial asters; they were bringing in pollen of a bright colour. To-day, Saturday, the 14th, bees are out over the farm in great numbers; we have seen no signs of crawling. Must assume they are well for the winter.

J. J. KETTLE.

Jottings from Huntingdonshire

St. Luke's Summer is here—a godsend to man and bee. The sun rose this morning straight up from down under without any cloud effects. There were no purpling flakes, no grey and golden hues, no blood-red vapours; he just came up in all his glory. True, his brightness was at first veiled in a morning mist, but the veil was too thin to transfer the golden orb to carmine red. An hour before he rose he bade the darkness flee and it fled, and the first soft hues of light awoke the birds—and how they sang! Young songsters not long from the nest found their voices, while the older birds, part through their moult, forgot their temporary disfigurement and joined in the chorus. How could they refrain? What a lovely view they must get from those tallest elms! A world of autumn beauty which recalls the splendour of spring. See the hedgerows: the hawthorn leaves are decked in every shade of brown and gold, while the twiglets are bespangled thickly with haws, coloured red maroon by the very sun which brought them forth. The wild-rose branches are nigh covered with hips, shaded orange, amber, and vermilion, looking lovely as they shimmer midst the sloes and 'neath the crabapple trees, loaded with fruit which looks, but doesn't taste, like huge white heart cherries. The chestnuts have begun dropping their leaves in great quantities, so too the ashes, but the oak and elm, the hornbeam and aspen wave their foliage in the breeze as if 'twere the middle of summer. The harvest is in, and ploughs of many kinds are busy turning the stubble down and the brown soil up. The bees are out and working hard, the ivies claiming much of their time. What a lovely sound it is to walk through a spinney on a day like this! Every tree almost is circled about with ivy, and the hum of the bees as they work the flowers is more delightful than the symphony of the limes in July. Within the hives all goes well. There is brood everywhere, and stores. Some of the latter, it is true, is unsealed, but this can be expedited by the applicaion of hot-water bottles over the brood nest. We don't want the bees to seal the cells before the honey is ripe, and honey cannot ripen unless the surplus moisture is driven off, and even if thick syrup be fed and stored the capping is left owing to the need of clustering over the brood: assist the bees by giving them a little artificial heat, and the sealing will be soon done. The little creatures have been waiting long enough for this fine spell, and now it is here they are making the most of it. I looked in one hive at 12.30 yesterday week, and was amazed at the fewness of the bees within. At first feared queenlessness. Closer investigation, however, showed nice patches of brood and only just sufficient bees left to cover it, the rest were foraging. I went to look again at 4 o'clock, and the number of returning bees amazed me; they were returning in crowds and the entrance was blocked; the following night was cold and chilly; small wonder that the cluster is contracted and only a limited amount of wax-making goes on. The next day I watched the hives closely; they all told the same tale—crowds of foragers. So impressive was the sight that my daughter took a snapshot of a corner of my apiary, which I enclose for the Editor's perusal.

There is much in apiculture that is puzzling, and nothing more so than when the bees discover some new source of nectar, the colour and flavour of the honey from which baffles us. Hence my recent remarks *re* water white honey. I saw some at a show in the summer and some last autumn, but no one could give me the origin or source. I was assured by the judges that the flavour was excellent. Light amber honey placed in strong sunlight will become lighter in shade, but not water white. With regard to Mr. Pearman, I am sorry to say that I have heard of a man who fed sugar syrup and light clover honey to his bees, and then extracted, bottled, stood in the sun to lighten it in colour and thicken it in density, and after put it on the market as water-white honey. It is not honest: we know it is not, and yet this particular man told me that unless he got his honey colourless his customers would not buy it. From this it would appear that we have an amount of prejudice to remove.

E. F. Hemming, Steeple Gidding.

Week-End Bee-Keeping.

By S. H. Smith, Cambridge.

(Continued from page 496.)

I do not want to bore you with this beetle story, but it pays to know something of what is being done by entomologists in the wars they wage against insects and allied forms in various countries. We talk about the reign of man, but insects dominate wide regions of this earth, and until we control or exterminate them we cannot live in peace, comfort or security in those regions, if we can inhabit them at all.

The subject is a big one. No other branch of natural history has such a promising future as applied entomology, and no other will offer such a wide field for useful and profitable work for our young people in the years to come. Beetles, moths and weevils alone cost yearly in the tolls they take of food crops more than is annually expended on all the armies and navies in the world. You will not wonder then that some entomologists dream dreams, see visions, and rejoice that economic entomology, as applied biology, is at last taking high rank.

To know the life history of an insect in its several forms is more important than to memorise exact data concerning its external shape. There is a vast difference between the stiff, stark, dead form and the beautiful mystery of the living thing. To gain any worthy knowledge of any living insect takes years of study. It demands keen powers of observation and deduction, a good understand-

ing, and wide sympathies. It is really a gift of the heart and mind, and those who have it understand intuitively without any conscious knowledge of how it happens.

In the U.S.A. alone over 1,000 entomologists are actively and profitably employed in studying the 100,000 or more different species of insects native to that country, which attack field crops, destroy forests, worry and kill domestic and wild animals, and inoculate human beings with deadly infections. As soon as the menace of the alien beetle, Popilia japonica, was evident a corps of entomologists was put on its trail.

It was soon discovered that the beetles were imported in their larval form in the soil about the roots of iris and azalea plants. The life history was quickly worked out. Most of its time is spent underground, and it does a vast amount of damage before it appears as a beetle. During August and September the female lays in the soil about sixty eggs; the larvæ hatch out in about fifteen days, and at once commence to devour large quantities of plant roots. When winter comes it burrows deeper and lies dormant until spring. It eats steadily from the advent of warm weather until June, when it pupates. The imagos emerge in July. The mature beetles live high for about six weeks, flying from tree to tree or from plant to plant, feeding, mating and egg-laying, and ever extending their territorial conquests. By October the beetles have disappeared, their reign in that form lasting only one short season.

As I stated before, £30,000 has been spent since 1918 in attempts to vanquish this little green beetle. But unless much larger sums are available the prospects are that in a few years it will cover more square miles of territory than are contained in the British Isles.

The control measures employed are as follows:—

1. The destruction of all non-economic plants within a half-mile band surrounding any infested area.

2. The collection by hand of the adult beetles during the eight weeks' period of their greatest activity.

3. The poisoning of the soil by sodium or potassium cyanide wherever larvæ are suspected.

4. A quarantine of all farm and garden produce during the two months of activity of the adult beetles, every article to be shipped out being carefully examined, and any infested material freed from the pests.

5. The search for an effective poison spray to kill the adult forms. This spray to be easily, quickly and cheaply applied, and to adhere to foliage without harming plants.

Thank you for listening so patiently to a story that may not interest you, but which may have a bearing on the mite problem. These mites must be somewhere in their thousands for everyone that is found in a beestock. You will also understand better now why the word "cure," in connection with any treatment applied to a bee-stock, can have no status.

We know something of the life history of the mite while it is in the thoracic spiracles of the bee, but nothing about its life history when outside of the bee. We must first find out all about that part before we can undertake an effective campaign.

Coming back at last to our little apiary you see we have segregated the mite infested bees in No. 2. We can attempt to rid those bees of the mites by various empirical treatments, or we can cut the Gordian knot by destroying the bees and mites. This can be easily done by a dose of poison gas.

Will the D.B.'s please make up their minds? Thumbs up! will mean we will do our best to help the bees by causing the mites to bite the dust. Thumbs down! will mean death to both bees and mites. Which shall it be?

Every D.B. thumb well up.

Very well. We will open our box of tricks. Here's a sprayer. For many years I have strongly advocated the washing of bees and combs during the spring and summer by a fine yet powerful mist spray such as is given by any good garden sprayer. The japanned kinds were recommended solely because these do not rust so quickly. A spraying acts beneficially by mechanical action alone in washing wandering mites off the bees and combs, even if plain water only is used. The mites are a feeble folk, and easily hurt or destroyed outside of the bees. The bees themselves further the results obtained by assiduously cleaning themselves and each other after a spraying.

When it gets too late in the season to spray bees, we can produce about the same effect by pouring a thin syrup over the seams of bees between the combs.

If now to the spray or syrup we add certain drugs or chemicals inoffensive to the bees, and that are not neutralised in the alimentary canal, we may impregnate the body fluids which the mites imbibe, and so successfully attack them by this means.

(*To be continued.*)

Granulation of Heather Honey.

A great deal has been said and written both for and against the granulation of heather honey, but yet we do not appear to have got anything conclusive on the point; so I have decided to try and fully investigate this matter if I can get material for the purpose.

What I propose to do is first to ascertain how far it is free from sources other than heather, that is its true source, then put each sample to the test of granulation.

If anyone can send me, as early as possible, a sample—say about 4 oz.—of what they consider to be *pure heather honey*, stating in what locality and what year it was gathered, also the altitude of the locality if possible, I shall be grateful, so that I may be enabled to conduct this investigation, the result of which shall be made known in the JOURNAL.

Kindly send samples to Mr. Geo. Hayes, 48 Mona Street, Beeston, Notts.

Our Bee Gardens.

By D. M. Macdonald.

Lawson, nearly 300 years ago, writing after his experience of forty-eight years' labour in the orchard and the garden, says that in addition to flowers, fruit, herbs and vegetables, "there is one other necessary thing to be prescribed which makes as much for ornament as either flowers or forme or cleanliness, and, I am sure, as profitable as any or all the rest, *which is bees well ordered*." Modern bee-keepers will agree as to the truth of the statement, but they, one and all, should be lovers of flowers, flowering bushes, shrubs and trees, as well as of the bees who admire, love and benefit by these floral offerings. Lord Bacon wrote: "God Almighty planted a garden, and, indeed, it is the purest of all human pleasures to keep it and to dress it." Our Poet Laureate has sung of "The Garden that I Love." It may be said of flowers as the poet hath said of music: "Who hath no love for them in his soul, let not that man be trusted." Come when they may, they should be admired, valued and treasured. The first flower in Spring, peeping up even from among the snow, or greatly daring, braving the chilly winds of March, or the last rose of summer, is each a delight. For all lovers of the garden fair what season of the year is more longed for than the Spring, "whose gentle breath enticeth out the kindly sweets and makes them yield their fragrant smells," and, let us add, for us and our bees their luscious sweets.

Gerarde wrote long ago that perfect happiness and pleasure could be best obtained in a garden. More ancient writers still dreamed that Heaven could best and safest looked for in the Orchard of the Hesperides, or in the pleasant garden of Elysium, and the Garden of Eden, even now, is a synonym for Paradise.

The possession of ducal acres is not necessary to secure for us this perfect enjoyment of the sweets of a garden. We must know our flowers as well as possess them to derive the greatest pleasure. "I would not have my garden too extended, not because flowers are not the most delicious things, speaking to the sentiments as well as to the senses, but on account of the intrinsic value of moderation. Three acres of gardens and a regiment of gardeners bring no more pleasure than a sufficiency. The latter makes us become acquainted, as it were, and even form friendships with our flowers individually, and then they make us pleasing returns by their beauty, health and sweetness. Hence, if the man with a small garden has his mind properly attuned, he may derive more real delight than belongs to the man with a thousand acres."

Yes! in the poor man's garden grow,
Far more than herbs and flowers,
Kind thoughts, contentment, peace of mind,
And joy for weary hours.

But the narrow roods or poles closely shut in do not bound "Our Bee Garden." Look along the rolling plain as far as the eye can roam, our bees are perfectly free to fly, putting every blossom to tribute. The rich store of nectar is held out and yielded ungroudgingly without toll—nay, the flower welcomes the bee, and there is a species of reciprocity. Like Mercy, there is a double blessing. It blesses *it* which gives and she who takes.

This extensive garden is our chief reliance. In early Spring, when the balmy, genial air calls the bees forth, do these industrious insects waste their energies in prowling about the small confines of cottage or villa gardens? Nay, verily! Their prescience teaches them that they would get but driblets of the precious nectar there, whereas, further afield, in countless places, they know, or can easily find out, there lie copious supplies. The willow belts along streams, the multitudes of flowering trees and shrubs which adorn the woodland areas, the orchard trees in their scores or hundreds, yield bountifully. Later, in June, acres of clover, stretching for miles to the full bounds of their flight, are free and open to the visits of the busy, industrious bee eagerly plying its task. Again, in Autumn, those glorious wastes of purple heather, extending league after league, every square yard scented like a honeycomb, yields illimitable supplies. Remember all these nectar-yielding areas are open to the bees without let or hindrance. All of these, like spokes from the hub of a wheel, branch out for three or four miles of a circular stretch, with the apiary as the hub, and embrace the confines of our bee garden. No rents, no rates, no taxes, no fee can be levied by the landlord, proprietor, tenant or occupier; and the farmer who owns the land is none the poorer for the loss of the sweets commandeered by our industrious little workers, however hard they may toil, indefatigably carrying home the nectar which is so vital to their well-being during the long weeks of winter. While we praise the industry of the bees, let us who are bee-keepers glorify the good God who supplies them so bountifully with such rich and abundant stores.

"Adieu Season 1922."

Most bee-keepers, I think, will be finishing this season and packing down with that satisfaction one has of having done something difficult and finished it, an experience which carries with it none of the exultation of conquest. Here, in our district of Ayrshire, it has been a case of attempting, but accomplishing comparatively little so far as honey is concerned. I could not go to an average per hive of surplus—indeed, I would say from observation that bees which were not near heather, or were not moved to it, would need all they have gathered, or its equivalent in sugar syrup, to winter safely. Nicely finished sections will be exceedingly scarce, and those fortunate to secure some will be able to get a good price. Extracted honey, besides being a small crop, is not of the nice quality usual, indicating that it has been gathered from mixed sources. White

clover does not yield unless we have sunshine and heat. These great factors were absent, and the bees were, perforce, compelled to try other flowers, whose nectar is not so nice. A few hives were moved from here to the heather about the middle of August, by which time it was just beginning to come in bloom, but the purple hills never did appear as we have seen them; there was no new growth on the plants, and what bloom there was, very quickly went past. The first ten days after the bees were taken were unfavourable, wet mostly, and when it was dry, high winds from north and north-west, consequently cool, one hive of the company perished from starvation. It was discovered in the last stages and fed, but, after all, it finished up with dying. One cannot but regret incidents like this, and a pound of syrup might have saved it. A starving stock must go about things very deliberately when food fails. The young brood are sacrificed, then the brood (sealed) cells are opened in their eager quest for food, and, lastly, the distracted bees insert their heads to the very bottom of cells and die. How distressing, this experience is to be pinned up on the wall of the bee-house as a warning, "We will feed next time."

On August 28, the weather improved somewhat, and we had ten days or so of fairly good weather, and the bees must have made the most of it. We have just had them home, and have taken a few nice sections. The brood nests are pretty well stored. Fact is, I hardly know how or where they got it in the time; but from heather, if conditions are at all favourable, given built-out combs, bees gather very quickly, and when it has been gathered, we have the honey *par excellence*. AYRSHIRE.

October 7, 1922.

British Bee-Keepers' Association Conversazione.

LECTURE BY MR. J. PRICE ON THE PREPARATION OF EXHIBITS FOR THE SHOW BENCH.

Preparation for exhibition, like many other sections of bee-keeping, requires considerable forethought, and the bee-keeper who imagines that he will attain success without it is sure to meet with failure. The haphazard bee-keeper who, through a stroke of luck, obtains an award, is asking for disappointment if he or she continues in such dilatory methods. A decade ago such things were, perhaps, commonplace, but every exhibitor of recent years knows full well that competition is now so keen that every possible care is necessary to secure success.

Consequently, my remarks are intended to help those to attain success who are prepared to go to some trouble in putting on to the show-bench bee products of the very best quality in its best form. I am convinced that preparation should be commenced at least twelve months ahead of the exhibition, and certainly longer for honey in the comb.

For the latter, the question of the strain of bee used is all-important, and in these days, when there are so very few stocks of good comb-builders, and even cappers, it is not an easy matter to find a stock with this desirable quality. The bee-keeper who possesses such a one may not have the skill nor be in a suitable district for producing honey in the comb.

We have, therefore, three things to consider:—(1) The district; (2) The bee that is to produce the goods; and (3) The skill of the bee-keeper. There are some districts where it is impossible to produce show sections; even marketable sections of comb honey are a rarity. These districts, however, are very often good places for producing honey for the medium and dark classes, and I have seen excellent samples of beeswax come from them.

Consequently, a sensible bee-keeper will confine himself to the possibilities of his district, and not attempt the impossible. On the contrary, in favoured districts where it is an easy matter to produce sections of light honey, the skill of the bee-keeper enables him to put on the show-bench the very best.

Until recently, very little attention has been given to strain in bees. We are told that the English bee is the best for comb honey, that the Italian is the best worker, and that the Dutch bees are great swarmers. Whatever may be said of these different varieties of bees, it simply implies that different families of honey bees possess certain characteristics. This being so, it is very natural that attention should be given to these particulars, and selections made for the purpose required. The best stock of a strain showing good qualities in comb building, whether crossed or pure, should be kept for that purpose, whilst others may be excellent for the production of the extracted honey.

We have now to consider the skill of the bee-keeper, and by this it is not intended to allude to the question of faking. This is very ably exposed in Mr. W. Herrod-Hempsall's book on "Judging Bee Products." My conception of the requisite qualities for a would-be exhibitor is that he must be able to think out his plans well beforehand, have precision in carrying them out, be careful in manipulation, have plenty of patience, and be a good sport in defeat.

Production.—This brings me to the question of producing the goods, or, rather, arranging for the bees to produce them, and I will deal first with the matter of sections. In this it is essential that the bees selected to produce them have proved themselves to be quick, good comb-builders, and even cappers. In my opinion, the best bees for this purpose are Blacks, either English or Dutch; but as there are so very few of the former, and the Dutch have such a bad name for swarming, probably the selection will have to be a stock from some cross, probably crossed with Italian. It is recognised that show sections must be produced

quickly, well filled, and free from travel stain.

To do this nothing is better than a natural swarm hived on clean combs, for preference on combs that have never been used for brood purposes. A rack of sections fitted with full sheets of foundation placed above these, without the excluder, allows the bees scope for comb-building and the storing of honey, while the worked-out combs provide ample space for the queen to lay.

With a good swarm in a district where forage is abundant, given plenty of sunshine at the time, the sections should be ready for taking off before the first brood emerges from the combs below. At times it is advisable to restrict the number of combs in the brood-nest, so as to force the bees into the sections.

It will be observed that if a swarm is to be used for the purpose, it is necessary to encourage swarming in the stock most suitable for this purpose. I have seldom seen first-class sections produced in a stock, and never on a stock where the brood combs are blackened with age.

In the preparation for extracted honey, the race of bee is not so essential; any strain of bee will suit, but it is necessary to prevent swarming in this case. Honey produced in a big stock, whatever the source, gets fully ripened, therefore is best in consistency for exhibition. Here again I would prefer hybrid bees; the way the pure Italians have of spreading on the face of the comb, I think, tends to lessen the ripening process. In any case, it is certain that honey improves by keeping it in the hive for some time.

We will now assume that the bees have produced the goods, and the utmost care will be necessary to keep it in as good condition as when the bees finished with it.

Sections should be cleaned, graded, and glazed immediately after removal from the hives, because bees, wasps, and flies may soil or puncture them if they are exposed. Not only this, but the moisture of the atmosphere will be attracted to the cappings, which later on means weeping combs. After glazing, they should be stored away in a warm, dark place until required.

It is needless to add that only those fully filled, evenly capped, free from pop holes and travel stain, and containing one sort of honey, should be kept for show purposes.

Liquid honey should be selected from combs where all the honey is of one colour, well capped over and fully ripe.

If half-a-dozen pounds of a particular sort is required, extract eighteen. Pass this through a fine strainer, even though you may have to warm the honey to do so. The thickest honey will go to the bottom and the thin to the top after a couple of days. The first six pounds taken from the tap at the bottom will be the thickest

Great care should be taken that the honey is not exposed to the air longer than possible, for the same reason I have already mentioned.

Extractor, ripener and bottles should be free from any particles of dirt or dust, and the caps should be placed on the jars immediately after bottling.

Air bubbles should be taken off all honey for exhibition within two days after bottling It is a mistake to allow air bubbles to remain on even when the honey is intended for exhibition in the granulated class.

Tainted Honey. It is a pity that tainted exhibits are so often found on the show-benches. Often this is caused by the careless use of smoke when taking the honey from the hives, the use of carbolic cloth, or a too free use of disinfectants in attempting to prevent disease. In many cases, otherwise good exhibits are spoilt through smoke from the fire while honey is being warmed, and it is also often tainted through being stored in close proximity to articles which seem to transmit their odour to everything around them, such as paraffin.

Beeswax for exhibition should be produced from cappings only, and, personally, I prefer to take the wet, sticky cappings as soon as possible after straining, pour them into an earthenware jar, and melt in a pan of water on a grid. When all is liquid, remove, and the next day take away the cake of wax, and use the honey underneath. Wax done in this way retains its aroma very much more than if done in water.

Several of the cakes are, after washing and drying, placed in another earthenware pot and melted in warm water. Afterwards strain and run into the moulds, taking care to prevent any dross, colouring matter, or condensed steam from going into the moulds. Slow cooling prevents cracking, and a good cake needs as much care as honey, for it soon loses its aroma if exposed. It should be packed away, for preference in tissue paper having no smell, and covered over with grease-proof paper until needed. A good rub with a piece of silk will give the necessary polish before it is sent for exhibition, or, better still, warming before a fire will revive the aroma and the gloss.

Observatory Hives.—The object of observatory hives should be educational as much as possible—a section of a hive, containing brood in all stages, all sorts of bees, not too many nor too few, well ventilated, and labelled to denote the various things of interest.

General Remarks.—It will be observed that I have laid great stress on cleanliness. Honey, however well kept, if not clean, is not deserving of a prize

Honey showing signs of fermentation should be banned. Fermentation is often caused by the presence of foreign matter, too much exposure, or a faulty place of storage.

The Dairy Show.

The honey and wax exhibits, like those at most other shows, are all of good quality, though not numerous. For the display of honey there was no entry, and in the section class, though there were three entries, only one exhibit was staged, and this was quite

worthy of the first-prize that was awarded it. Mr. J. Brown, of Bristol, awarded the prizes as follows :—

Six Jars Light Extracted Honey (15 entries).—1st, F. W. Bunting, Exning, Newmarket; 2nd, J. Ward, Hesketh Bank, Preston; 3rd, D. J. Griffiths, Felinfoel, Llanelly; 4th, C. Robinson, Grateley, Andover, Hants.; commended, Mrs. Hines, Watley, Twyford, Winchester.

Six Jars Medium Coloured Extracted Honey (14 entries).—1st, Mrs. Hines; 2nd, F. W. Bunting, Exning, Newmarket; 3rd, C. Robinson; 4th, E. C. R. White, Winterbourne Gunner, Salisbury; commended, H. Aubrey, Felinfoel, Llanelly.

Six Jars Dark Coloured Honey (5 entries).—1st, E. C. R. White; 2nd, J. Gordon & Sons, Torbrex Nurseries, Stirling.

Six Jars Granulated Honey (8 entries).—1st, ; 2nd, J. Ward; 3rd, C. Robinson; h.c., H. Aubrey; commended, G. Davis, Woodland, Blandford.

Six Sections of Honey other than Heather (3 entries).—1st, W. M. Robson, Wooler (the only exhibit staged).

Beeswax : 2 1-lb. Cakes (6 entries).—1st, E. C. R. White; 2nd, G. Davis; 3rd, Mrs. Scott, Brandesburton, Hull; commended, C. Robinson.

Beeswax : 3 lbs.; for Retail Trade (2 entries).—1st, E. C. R. White; 2nd, Mrs. Scott.

Interesting Exhibit (1 entry).—1st, Messrs. E. H. Taylor, Welwyn.

Colonial Honey (4 entries).—1st, H. G. Sibbald, Toronto, Canada; 2nd, Government of Quebec; 3rd, H. D. McIntyre, Durham, Ontario; commended, J. L. Byer, Markham, Ontario.

Notts. Bee-Keepers' Association.

A well-attended conference of members and friends was held in the Albert Hall Institute, Nottingham, on Saturday, October 7, under the chairmanship of S. Ellis, Esq., of Hawksworth. The proceedings were opened by an excellent, well-delivered lecture on "Diseases of the Larvæ and Adult Bees," by Mr. J. Herrod-Hempsall, F.E.S., who gave a minute description of the most important diseases the bees were subject to, and how these diseases were to be recognised and dealt with to prevent them spreading, and so far as possible to bring about a cure.

This was followed by three other short papers on :—

1. "The Abnormal Season of 1922 and Some of the Lessons it Taught," by Mr. W. Sharpe, Kirkby.

2. "The Pollination of Flowers by the Bee," by Mr. W. Trinder, Edwinstowe.

3. "The Production of Heather Honey," by Mr. D. Wilson, Belper.

Each paper raised considerable discussion, and a large amount of interest was shown in each.

There were also classes for honey, etc., as follows :—

Competitions for honey and wax (open to all members) :—

Class 1.—For the best six 1-lb. sections of comb honey, produced in any year, 1st prize, 7s. 6d., E. Saddington, Ossington; 2nd prize, 5s., G. Marshall, Norwell.

Class 2.—For the best six 1-lb. jars of extracted honey produced in any year. 1st prize, 7s. 6d., G. Marshall, Norwell; 2nd prize, 5s., E. Saddington.

Class 3.—For the best six 1-lb. jars of granulated honey, produced in any year, 1st prize, 7s. 6d., G. Marshall; 2nd prize, 5s., E. Saddington.

Class 4.—For best sample of beeswax to approximate 8 ozs., 1st prize, 4s., G. R. Bostock, Aslockton; 2nd prize, 3s., G. Marshall.

The exhibits were judged by Messrs. Trinder, Dolman and Goodlad. They were followed by Mr. Riley, who finally decided the awards.

Show at Kendal.

The Four Northern Counties Fruit Show and Congress was held in the Market Hall, Kendal, October 4 and 5, 1922.

The exhibition in itself was little short of marvellous. Everywhere one turned the show reflected great credit upon the exhibitors, who had gone to endless trouble to make their exhibits attractive. Competition was keen, and the awards were evenly and well placed. The honey section was often the centre of attraction, although the quantity exhibited was not up to the 1913 show, the quality was up to the usual show standard, all classes showing keenness of taste by the exhibitors in preparing their exhibits. The prizes as awarded giving entire satisfaction, a difficult matter, as a rule, so this reflects good judgment for Mr. Price, of Stafford, who officiated as judge. The non-competitive exhibit of an Observatory Hive, with bees and queen, exhibited by Mr. G. Chatham, of Kendal, was greatly admired, and a continual stream of inquiries were answered by the exhibitor throughout the two days' show. It was well worthy of the award of merit given to it. Next to this came the complete beehive, and bee-keepers' appliances, also exhibited by Mr. G. Chatham, not for competition, showing the articles used in modern apiaries. Also an educational exhibit, including the new metal comb in standard frames, partially drawn out by the bees with wax, a new wire queen introducing cage specially adapted for use with these metal combs, beeswax, and the foreign vegetable and mineral waxes that have been used by, and sold to, the public as beeswax. Thanks to modern methods of detection, these deceitful actions are becoming a thing of the past. The glazed cases of an artificial swarm and the different races of bees were very interesting. Honey vinegar, also mead, photographs of bee-hives and manipulation, all of which helped to make the honey section attractive and educational.

There were fifteen classes for honey in comb and extracted honey in bottles, beeswax, and cakes made with honey. Thirteen classes were well represented. The chief winners were :—W. M. Robson, of Wooler, with four first prizes; B. Sowerby, of Penrith, with two first, five second prizes; J. Lindsay, of Arnside, with six firsts, one second prize; T. Hobson, Kendal, one first, one second prize; Mrs. Jennings, Kendal,

second for cake; and R. Park, Kendal, one first for comb-honey in shallow frame; G. Chatham, Kendal, awards of merit for observatory hive with bees, bee-hive and bee-keeping appliances.

(*Communicated.*)

Staffordshire Bee-Keepers' Association.

The Autumn Exhibition of Honey and Beeswax was held at the County Education Buildings, Stafford, on the 30th ult. There were eight classes, and the number of exhibits were 74.

Persons engaged in bee culture have a lively recollection of the seasonal difficulties which have had to be encountered, and considering those difficulties it was somewhat surprising to find such a good exhibition of the products of the hive. Mr. George Franklin, of Kenilworth, for 27 years bee expert to the Warwickshire County Council, and now secretary of the Warwickshire Bee-keepers' Association, was the judge, and his awards were as follow :—

Two Sections of Comb Honey.—1, G. Evans; 2, G. Gripton, Bromstead; 3, J. B. Leighton, Stafford.

Two Jars of Light Honey.—1, B. Warrender, Stavegate, Blymhill; 2, G. Gripton; 3, W. Sears, Calton Hall.

Two Jars of Honey, other than light (five entries).—1, A. C. Beardmore, Gnosall; 2, M. Craddock, Longden Green, Rugeley; 3, J. B. Leighton.

Two Jars of Granulated Honey.—1, G. Evans; 2, J. Taylor, Stafford; 3, M. Craddock.

Cake of Beeswax.—1, J. B. Leighton; 2, M. Craddock; 3, J. Swanwick, Stone.

Shallow Frame of Honey for extracting purposes.—1, J. B. Leighton; 2, G. Gripton; 3, G. Evans.

Special Class for two jars of Light Honey.—1, J. B. Leighton; 2, C. F. Brookes, Alrewas; 3, G. W. Buttery, Doxey.

Gift Classes for the Staffordshire General Infirmary.—1, M. Craddock; 2, C. F. Brookes; 3, B. Warrender.

Silver Medal of Merit, given by the Apis Club.—J. B. Leighton, 11 points.

The prizes were presented to the successful competitors by Mrs. Alsop, the gathering taking place under the presidency of the Rev. A. R. Alsop one of the vice-presidents of the Society. It may be added that the prizes in the special class for light honey were a W.B.C. Hive, given by Messrs. E. H. Taylor, Ltd., Welwyn; appliances to the value of £1, given by Messrs. C. Lees & Son, Gaol Road, Stafford; and a smoker and a feeder, given by Messrs. Thorn & Co. (Stafford), Ltd.

Also in Classes 2 and 3, in addition to the cash prizes, special prizes of "Bacterol," given by Messrs. Bacterol, Ltd., and Izal products, given by Messrs. Newton, Chambers & Co., Ltd., were awarded.

Mr. George Franklin subsequently gave an address, in which he reviewed the past honey season. The lecturer said the one thing, above all others, which had made the past season remarkable was the peristent swarming of their bees, and in all his experience he did not remember one to equal it in that respect. Another unpleasant feature of the past season was that there had been so little honey to compensate them for the extra trouble their bees had given them. The cause of that, as everyone knew, was the weather, and there would be no honey glut when there were so many cold nights.

He had always thought and still believed that the old English black bee was the best. By breeding from the best stocks of this variety, he could always get as big stocks, and secure as much honey, as could be raised from the much-vaunted breeds of to-day. There had been so much cross-mating that one got "mongrels" of all types, and that was chiefly what their bees were to-day. He looked upon the disappearance of the old English black bee as not one of the least of the evils following in the trail of "Isle of Wight" disease. After this season of swarming, there would be many weak colonies facing this winter, and he thought the best safeguard was to unite. Many bee keepers took pleasure in trying to winter a weak colony, when it would contribute greatly to their success if they united their stocks more. He emphasised the importance of consistent feeding, and gave several recipes for autumn feeding.

(*Communicated.*)

Honey Show at Ongar.

This was held in connection with the Agricultural Association, on October 12. Judges : Mr. Alder, jun., Mr. Lunnon.

Three jars extracted, open to cottagers : 1st, J. Lee, Ongar; 2nd, Mr. Peacock, Shelly; 3rd, Mr. Gould, Stapleford Tawny.

Three sections, open : 1st, Dr. Ferguson, Ongar; 2nd, Mrs. Calner, Ongar; 3rd, Miss Hall, High Ongar.

Six jars extracted, open : 1st, Dr. Ferguson; 2nd, J. C. Lee; 3rd, Miss B. B. Brown, Ongar.

One shallow frame : 1st, Miss B. B. Brown; 2nd, J. C. Lee; 3rd, Dr. Ferguson.

Special prize for most points in open competition given by R. Lee, Uxbridge—Dr. Ferguson.

Special prize for best sections given by R. Lee, Uxbridge—Dr. Ferguson.

Mr. G. A. Taylor exhibited trophy, not for competition. Considering the season we had a good number of entries, several fresh beekeepers whom we hope to get into the Association sending entries.

(*Communicated.*)

Honey Imports.

The registered value of honey imported into the United Kingdom during the month of September, 1922, was £10,822. From a return furnished by the Statistical Office H.M. Customs.

Bee Shows to Come.

November 16, at Beverley, in connection with the Beverley and District Chrysanthemum Society's Show. Open Classes.—Schedules from T. T. Taylor, Hon. Sec., Beverley and District B.K.A., 137, Keldgate, Beverley.

Special Prepaid Advertisements.
One Penny per Word.

PRIVATE ADVERTISEMENTS.

24 DOZEN SECTIONS, all well filled, some heather, 22s.; f.o.r.—SIMCOX, 17, Victoria Road, Fallings Park, Wolverhampton. k.31

STRONG STANDARD LIME TREES, 8 ft. high, excellent for shelter and honey, 18s. per dozen, £6 10s. per 100, f.o.r. for c.w.o.—E. KING, The French Garden, West Ashling, Chichester. r.k.32

GREAT BARGAIN: OWNER GIVING UP.—Seven Stocks Native Bees with Queens and good stores in excellent W.B.C. Hives, one Simmins "Conqueror" Hive and several of Lee's and Nucleus, also Sladen's "Queen Rearing" Hives, Geared Honey Extractor, Honey Ripener, and all essentials of modern apiary. Inspection invited.—7, Harrington Road, Preston Park, Brighton. k.33

EXCHANGE, new Bee Appliances for Honey, Pullets, or Ducks, etc. LONGLEY, 35, Tharp Road, Wallington, Surrey. r.k.34

12-INCH X-RAY COIL, by Schell, 220 v. D.C.; bargain, £20.—Address, Box 94, B.B.J. Office, 23, Bedford Street, Strand, W.C.2. k.35

LIGHT HONEY wanted for cash. Send sample and price. — BOWEN, Coronation Road, Cheltenham. k.39

THE World's Famous Raspberry, Lloyd George, perpetual fruiting, 10s. dozen, 60s. and 70s. per 100.—J. J. KETTLE, The Violet Farm, Corfe Mullen, Wimborne, Dorset. h.78

WANTED for the Continent, a Queen Breeder, methodical and capable of working to schedule time in producing queens in quantity; single person of either sex.—Apply, giving references, to BOX 93, BRITISH BEE JOURNAL, 23, Bedford Street, Strand, W.C.2. k.2

RASPBERRY CANES, Bath's Perfection, strong, fibrous-rooted fruiting canes, 5s. per 100, 25s. per 1,000, carriage paid; Sir Joseph Paxton Strawberry Plants, price as above. A. SHARP, Halstead Farm, Barrowford, Nelson, Lancashire. k.41

WANTED, Light Car, Singer, Swift, or similar make, about 7 to 8 H.P. Wanted, 1 or 1½ H.P. Electric Motor, 1,000 revs., 110 volt.—W. HERROD-HEMPSALL, Old Bedford Road, Luton. k.42

SELL.—Two small powerful Acetylene Brass Head Lamps, with separate generator, suitable light car or cycle car, £3 the set; carriage forward.—HERROD-HEMPSALL, Old Bedford Road, Luton, Beds. c.77

BEES.—Shallow Frames, drawn out, wanted. Quote lowest price delivered.—SMITH, Shoemaker, Inverurie. k.40

BUSINESS ADVERTISEMENTS.
1½d. per word.

THE WISE BEE-KEEPER looks for quality. The South Hampshire Apiaries breed only from the very best strains. Result: Quality and satisfaction. Beginners' Outfits from £5.—All communications, H. E. NEWTON, New Milton, Hants.

CLEAR BOTTLES, rounds, squares, with caps and wads. Low cash prices.—BOWEN. k.37

FAMOUS COTSWOLD QUEENS for October re-queening, exceptionally hardy, good winterers, 7s. 6d.—BOWEN, Coronation Road, Cheltenham. k.38

4-FRAME NUCLEUS, strong, healthy, 1922 Queen, 30s.—DAY, St. Asaph, Stevenage. k.36

EX-SAPPER writes 29/9/22 *re* Fakenham Queens: "Spring count 5 colonies (queens introduced June, 1921). One gave 142 lbs. surplus, no swarm. Four worked also for increase, make final 1922 results, 17 8- and 10-frame colonies for wintering, six 10-frame colonies, and three 4-frame nuclei sold, and 5 cwt. of surplus honey. Not six stings from your strain the whole season. Your ten 1922 queens supplied are doing well. Please book me 50 1923 queens." Where in Great Britain this season has that been equalled by any other race or strain of queens and bees? It spells good bee-keeping, exceptionally good bee-keeping, good queens, and the first-class bees only real good queens can ever produce. All were faced with a bad season, *just like yours*. Not bad, is it? k.18

ATKINSON'S FAKENHAM QUEENS plus ex-Sapper's care and attention account for the foregoing little lot. My Queens will yet be in supply until mid-October, or while they last; quite young, pure Italian strain, price 7s. 6d. each. ATKINSON, Fakenham. k.19

LONDON DOCTOR breaks into holiday hours and writes from Austrian Tyrol, 4/9/22, a striking appreciation of Atkinson's Queens (the Fakenham sort). Has tried out many others queens, and in a significant phrase adds he is "clearing them out." Too late this season to publish full details. See "B.B.J." columns next spring. k.19

HAVE YOU READ "THE BEE WORLD"? If not, why not? Every number in itself is a useful literary work for practice and reference. Specimen copy free.—Offices: THE APIS CLUB, Port Hill House, Benson, Oxon.

STRICTLY BUSINESS.—6 lbs. Flavine—S. B. Candy, 7s.; 10 lbs. Flavine Honey Sugar, 10s.; 10 lbs. Autumn Sugar Syrup, 8s.; all carriage paid to any address in Great Britain.—S. H. SMITH, 30, Maid's Causeway, Cambridge. b.23

TO ALL SECRETARIES and BEE-KEEPERS.—Send to me for samples of Honey for autumn feeding.—F. GOODRICH, 10, Weston Park, Crouch End, London. h.106

HONEY FOR BEE FEEDING.—Australian, new, 60-lb. tin, 35s.; West Indian, new, 56 lbs. 38s. 6d.; Californian, old crop, 60 lbs 30s.; carriage paid; reduction quantities; samples on application.—LONDON TRADING AGENCY, 32, St. Mary Axe, London, E.C.3. r.k.30

CANDY! CANDY!! CANDY!!!—4 lbs., 4s. 9d.; 7 lbs., 7s. 3d.; 10 lbs., 10s.; 28 lbs., 26s.; carriage paid; pure cane sugar (white).—HENSLEY, Luton Apiary, Chatham. k.25

CANDY, 4 lbs., 4s. 6d.; 10 lbs., 9s. 9d.; larger orders, 9d. per lb., f.o.r.—COBB, 33, Bevan Road, Plumstead. r.k.26

SECTIONS.—Small quantity for Sale, 18s. to 24s. per dozen, carriage paid.—HARVEY, Apiarist, Andover.

WINTER CANDY, medicated or plain, from pure cane sugar; 4 lbs., 4s. 6d.; 7 lbs., 7s. 6d.; 10 lbs., 10s.; 28 lbs., 26s.; post free.—STONE & CO., Wilson Street, Bristol. k.28

QUEENS. — PRYOR, Breachwood Green, Welwyn. r.k.15

HONEY, in 28- or 56-lb. tins, finest quality, for Sale.—HARVEY, Apiarist, Andover. r.k.15

CANDY.—The very best, made from pure white cane sugar, in 1-lb. cakes, 1s.; 7 lbs., 7s. 6d.; 10 lbs., 10s. 6d.; post paid.—HARVEY, Apiarist, Andover. r.k.16

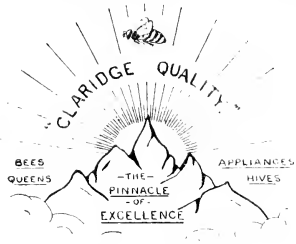
ITALIAN QUEENS by RETURN OF POST. Tested, 9s. 6d.; Untested, 7s. 6d.—PEARSON & GALE, Marlborough.

BEES REARED ON ALF. RYALL'S LINES keep well. Buy his advice.

"WIGHT" AND "ACARINE" DISEASES.—Prevention and removal; invaluable advice; 5s. 6d. "An eye-opener."—ALF. RYALL, 8, Ospringe Road, N.W.5. r.c.87

STEEL'S SUPER CANDY.

4 lbs., **4/8**; 10 lbs., **10/-**; carriage paid.
Special quotations for quantities.
STEEL'S BEE HIVE WORKS,
WEST ASHLING, CHICHESTER.
Branch: THE BEE HIVE, BEOYLE ROAD, CHICHESTER.



F. M. CLARIDGE, Copford Apiary, Colchester.

GORDON ROWE, 28a, Moy Road, Cardiff, requires gross lots new 1st grade Sections

PARCHMENT CONTAINERS, stamped "Fine Lemon Curd," offered at half price to honey producers who can affix labels over the printing, 1 lb., 4s. 9d.; 3 lb., 4s.; ½ lb., 3s. 6d.; ¼ lb., 2s. 3d. per 100. Add for carriage 1s. 6d. to each 6s. value ordered. Terms cash. 2-5 cwt. lots light English Run Honey required urgently. Send sample and price.

Advertisement Rates.

British Bee Journal or *Bee-keepers' Record.*

	£ s. d.
Full page	4 10 0
Half page	2 16 0
One-third page	2 0 0
Quarter page	1 15 0
1½ in. across page	1 10 0
1 in. across page...	1 0 0
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1½ in. single column	0 17 0
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Discount for a series of consecutive displayed advertisements:—Six insertions, 2½ per cent.; Twelve insertions, 5 per cent.; Twenty six, 15 per cent.; Fifty-two, 30 per cent.

TAYLOR'S SOFT WHITE CANDY.

Manufactured from guaranteed pure White Cane Sugar.

1/- per lb., post extra,
or 4lb. parcel, **5/-** post free; 7lb., **8/-** post free; 10lb., **11/-** post free.

Special quotations for large quantities.

Feeders, Quilts and Winter Appliances of every description. Illustrated Catalogue post free on application.

E. H. TAYLOR, Ltd., Beehive Works, WELWYN, HERTS.

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Sixty-Eighth Annual Show
of
Dairy and Farm Produce
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Buttermaking Competition

At KILMARNOCK, 19th and 20th October, 1922.

Special Competitions for POTATOES, VEGETABLES, FRUIT and HONEY, also ALLOTMENT HOLDERS' CLASSES and HOME BAKING Competitions.

Total Premiums—£500.

Entries close FRIDAY, 6th October.

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58, Alloway Street, Ayr.

The products of the Apiary, of Poultry and Farm Stock, of the Fruit and Vegetable Garden can be Advertised and Sold through

THE
Bazaar, Exchange & Mart
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Get a Copy—Thursday and Saturday, 3d. The "Bazaar" publishes also practical handbooks by experts. Send for full catalogue, post free from WINDSOR HOUSE, Breams Buildings, LONDON, E.C.2

MEDICATED OR PLAIN WHITE BEE CANDY.

4 lb. parcels, post free, 4/6; 7 lb. parcels, post free, 7/3; 10 lb. parcels, post free, 10/-.
Special quotations for larger quantities.

HAWKES BROS., LTD., CHELMSFORD, ESSEX.

For best bees, queens and appliances come to PEARSON & GALE, Marlborough.

FOOD FOR BEES.

Guaranteed Made of Pure Cane Sugar (White). { Medicated Syrup for Autumn Feeding ..... 7 lb., 9/6; 14 lb., 16/-; 28 lb., 28/6
Candy „ Winter „ ...1 lb., 1/-; 4 lb., 5/-; 7 lb., 8/-; 10 lb., 11/-

All Carriage Paid. Can we quote for Pure Cane Sugar. Any quantity supplied.

C. T. OVERTON & SONS,—————CRAWLEY, SUSSEX.

The Premier Quality.

EVERY DAY we receive doleful reports from those who have purchased elsewhere and lost their bees through disease or want of vitality. Why not get the BEST, and be happy ever after?

List Free. 20 page Annual 4d.

Queenland, Heathfield, Sussex.

BEE CANDY.

Made from Pure Cane Sugar, and guaranteed free from Glucose. Prices:—

1 lb. at 1/-, post 9d. 4 lbs. 5/-, post free.
7 lbs. 8/- post free. 10 lbs. 11/- post free.

Special prices for large quantities on application. SYRUP in 7 lb., 14 lb. and 28 lb. tins.
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The Bee-Keepers' Calendar.

OCTOBER, 1922.

26 Thursday. "Others, like soldiers, armed in their stings,
Make boot upon the summer's velvet buds,
Which pillage they with merry march bring home
To the tent-royal of their emperor."
Shakespeare, "King Henry V."

27 Friday. "At noon the wild bee hummeth
About the moss'd headstone."
Tennyson "Claribel."

28 Saturday. "Returning glad with some mysterious joy
They brood o'er grub and cell; and cunningly
Are new combs wrought and clammy honey formed."
Virgil, Georgics, Book IV.

29 Sunday. "There, in close covert, by some brook,
Where no profaner eye may look,
Hide me from day's garish eye,
While the bee with honeyed thigh,
That at her flowery work doth sing,
And the waters murmuring,
With such concert as they keep,
Entice the dewy feathered sleep."
Milton, "Il Penseroso."

30 Monday. "Audley feast
Hummed like a hive."—*Tennyson, "Audley Court."*

31 Tuesday. "As bees thee hame wi' lades o' treasure,
The minutes winged their way wi' pleasure."
Burns, "Tam o' Shanter."

November.

1 Wednesday "Here along the southern wall
Keeps the bee his festival;
All is quiet else—afar
Sounds of toil and turmoil are."
A. Dobson, "A Garden Song."

Importance of Sugar.

Sir James Crichton-Browne was the principal guest of Messrs. Bovril, Ltd., at the dinner given by the company at the Trocadero Restaurant on the occasion of the distribution of prizes and certificates won at the national examination of the Institute of Certificated Grocers, which was held in London in June last. Mr. John Hooke (chairman of the Council of the Institute) presided.

Sir James Crichton-Browne, in proposing the toast of "The Institute of Certificated Grocers," said food questions were now in the ascendant in a way they had never been before. It was at length perceived that the question of the food needs of a country was fundamental. When reporting for the year 1921 the lowest death rate ever recorded in England and Wales, and noting the betterment of the public health in various directions, the Ministry of Health connected all this with the enormous improvement in the

quantity, quality, and variety of the food consumed by the English people. The curriculum for the institute's examinations would, he hoped, some day include dietetics. Food was the happy hunting ground of the faddist, and he supposed there was not any kind of food that had not been idiotically accused of causing at least half a dozen different diseases. Cancer, according to the wiseacres, had been traced to tomatoes, margarine, tobacco, tartaric acid, and potted shrimps—(laughter)—and only the other day an eminent man of science—a great physicist—wrote to the *Times* to suggest that it was due to the use of tea and coffee. He evidently forgot that cancer existed in this country long before the introduction of tea and coffee, and occurred amongst cats, dogs, and mice, who did not usually partake of those beverages. Cancer was rare in Japan, where excessive tea drinking had gone on for generations, and among the Bedouin Arabs, who were specially addicted to coffee, but it was found in African tribes who had never tasted Bohea or Mocha.

Such statements were very mischievous when proceeding from a scientific source, and should not be emitted haphazard and without the clearest proof. They frightened the weak-kneed and led them to change their food habits, often to their detriment and discomfort. The latest scare of the kind was started at Newcastle-on-Tyne last month at the annual conference of the British Dental Association, when a prominent member of that body denounced sugar, root and branch, and went so far as to say that sweets, chocolates, and pastry, by promoting the decay of the teeth, were seriously injurious to the health of the people and were doing more harm than drink. (Laughter.) With the profoundest respect for their dental brethren, to whose good advice and mechanical skill they were so much beholden, he suggested that they should leave sugar alone. Dental decay was a very complex question, and recent researches indicated that it was perhaps attributable to the want of a certain vitamin in the food in early life, and would be best prevented not by giving up sugar, but by taking cod liver oil. A special and highly competent committee had been appointed by the Medical Research Council—that was the Government—to investigate the subject, and in the meantime he would remind their dental friends that sugar perhaps more than any other article of food tended to promote the flow of saliva, and it would not be denied that free washing by the salivary fluid conduced more than anything else to the cleansing and preservation of the teeth. Sugar in moderation also promoted the flow of gastric juice, and so aided digestion. When he was in Jamaica he examined the teeth of the school children there and found in them not a trace of decay. More perfect and regular teeth it was impossible to imagine, and yet the mouths of those children were never free from sugar. They were sucking sugar cane all day. Physical development had many factors, but amongst those food was the most important, and of foods sugar was not the last important. It was a very significant fact when we found that in the different races of mankind there was a correlation between physical development and the amount of sugar consumed. The best developed races ate the most sugar, the worst developed ate the least.

Of all the forces engaged in the Great War the Anzacs were physically the finest and had the best teeth, and the Australians consumed more sugar than any other race on the face of the earth. Before the war Australia consumed 109 lbs. of sugar per head per annum. Next to Australia came Denmark (and the Danes were a fine race), with 98 lbs. per head per annum. Next to Denmark came the United Kingdom with 85 lbs. and the United States with 81, while at the other end of the scale stood Spain with 13 lbs. and Italy with only 10 lbs., and the Spaniards and Italians, admirable as they were in many ways, were not just as well grown as the big sugar eating peoples. In face of such facts, it was simply fatuous to condemn sugar and to affirm that sugar, sweets, and chocolates were more destructive than alcohol to the public health. Even a smattering of dietetics would enable grocers to answer a fool according to his folly when he came into their shops and propounded such rubbish. (Cheers.)

From such an authority the above testimony to the importance of sugar as an article of food is of great value. Honey is a sugar, or perhaps it would be more correct to say a combination of sugars, in a form that is more valuable as an article of diet than ordinary cane or beet sugar, for it is more easily digestible, and not having undergone the heating and other processes necessary for the manufacture of sugar, the natural vitamines are not destroyed; and if honey was eaten instead of sugar there would be no need to take cod liver oil to supply vitamines.

Jottings from Huntingdonshire

Another fine week, but not a bee-week. Winds, with a touch of the Arctic about them, have induced the bees to stay at home. Syrup feeding being at an end, we would not mind so much the lowering temperature were we sure that all the stores are now sealed. The day for candy has arrived, and I hope that those new to the craft will bear in mind that stocks short of at least 24lbs. of sealed store should be wintered down with candy, but it should be noted that it is not necessary to give candy to the tune of one pound to every pound of honey short. A pound of candy will carry a stock of bees farther than sixteen ounces of honey. There are bee-keepers who refute this, but a good test will prove to the most sceptical that 14lbs. of candy will carry a stock through the winter where there are little or no autumn stores. Of course, no good bee-keeper would allow his bees to reach mid-October without some sealed store, and a prudent apiarist will see that the store is sufficient for at least four months, and in some districts six months' store is not too much. It is unwise, however, to feed be-

yond the requirements of the district. In other words, to feed sugar syrup until there are four frames of comb completely filled and six half-filled, is not wise. This means that there will be a considerable surplus when the honey flow begins in the following spring. It is true that the combs untouched can be taken out and used for swarms or weaker stocks, but from experience I have learnt that bees do not like to be plumped with sealed syrup from other hives, while sealed honey is usually acceptable. Moreover, I have known swarms absolutely refuse to stay in a hive in which had been placed a few combs of sugar syrup.

With regard to candy, be sure it is good stuff. Everyone can make candy, but few can make it of a consistency which suits the bees perfectly. Some make it too hard, some too soft, some what in parts of Yorkshire is known as "frazzle" it, i.e., bring it to boiling point too quickly, which creates a kind of caramel. Others, again, never completely bring the sugar to the boil, and so run the risk of undissolved granules. The ideal candy is such which the bees will always consume, even when the spring honey flow has commenced, and, more, will enjoy it. The bad candy is that which the bees will only touch when starved to it, and even then, during a cold spell, are so unattracted by it as to refuse to break away from their cluster to consume it. Thus it comes about that one sometimes hears of bees starving in the midst of plenty—they won't do this if that plenty is of the right sort. From the consideration of first cost, it is cheaper to make one's own candy than to buy; but better to buy a good candy than to make inferior stuff and lose your bees. I ought to say here that I find that Dutch bees will tackle a hard candy where other bees won't, and I notice that hybrids are less partial to candy than Italians. These last will thank you for candy if the consistency is right. Mr. Bowen, of Cheltenham, seems to have discovered the secret of making bee candy to perfection. I do not know whether his recipe is common property or not. Doubtless all those candy makers who advertise in THE BRITISH BEE JOURNAL can give good stuff to the public, and my advice to the novice is, cast a glance down the advertisement columns of THE JOURNAL or THE RECORD rather than adopt the penny wise, pound foolish policy. With reference to wintering surplus combs, I notice Mr. A. J. Riley, page 407, advocates storing them out of doors in an empty hive with many spare lifts. Can he tell us how he guards against mould? Even in a hive where bees have wintered I have noticed mould on some of the outer combs, especially if the winter has been one of many humid days. Mouldy combs are injurious to the bees. I know of no better way than storing them in a dry place inside a travelling bee-box or a swarm box, where such be available. Otherwise they can be well preserved by being wrapped in paper parcels and placed in a dry room, safeguarded from mice, of course. —E. F. HEMMING, Steeple Gidding.

Week-End Bee-Keeping.

By S. H. SMITH, Cambridge.

(*Continued from page* 508.)

When acted on in the alimentary canal, certain chemicals release gases which are eliminated in part through the mucous membranes of the respiratory tracts, and the mites may be attacked this way.

The same chemicals may be added to bee candy, and if by the time we close down for winter there are not enough stores of honey in the hives, we may place enough of this candy over the frames, all at one time, to last the bees until spring.

It is warm enough to-day to spray the bees without chilling any brood, but as it is best to treat as many bees as possible, we must wait until later in the day, when all foragers are at home.

To the spray fluid or to the syrup we may add a little chloroform. A very small dose induces the cataleptic state in any insect or allied forms, and life soon becomes extinct when such treatment is prolonged.

But if bee stocks are liable to be invaded by predatory mites at certain seasons, or at any time, we must devise methods to protect them before they become fatally infested.

If the lives of children are to be saved, we must begin to act not only before they begin to die, but before they get ill. You won't reduce the death rate of children or bees by "curing" them, but by keeping them well.

Here's a porous cardboard pad that is impregnated by substances giving off vapour that are inimical to mites. Such pads placed in position in July might kill off the mites as fast as they are brought into the hive on the bodies of the bees.

Here's a roll of corrugated paper impregnated with the same chemicals that are in the pads, with the addition of an inflammable resin. When the lighted cartridge is used in an ordinary smoker a brood chamber can be filled with the dense, white smoke. The theory is that the vapours must reach the mites, because the bees when fanning their wings to clear the air naturally work the thoracic spiracles to their full capacity.

You see we are not dependent on weather conditions when attempting to relieve a "crawling" bee stock. If it rains for days at a time or high winds make it impossible to open a hive, you may puff the brood chamber full of the medicated cartridge smoke at any time of the day or night that is convenient to you. You may push a pad on to the floorboard of any hive at any time, rain or shine, provided it has a full width entrance.

If it is an old-fashioned kind, with the brood chamber nailed to the floorboard and with an entrance only a couple of inches wide, you may cut the pad in strips and push the pieces inside. The volume of vapour liberated will be the same, though of course it is better to have the substances produced

the vapour evenly distributed under the frames.

The box of tricks is empty—and there is not one "cure" in the contents. From the entomological point of view it is to be regretted that the necessity should ever have arisen of using any one of the items. Also that during the war the reading matter of bee journals should have been filled with the shoutings and yodellings of "cures" for something nobody knew anything about.

If there had been one entomologist in any Government we've had during the past 18 years things might have been different to-day. Thousands of pounds have been thrown away in futile conferences, committee gatherings, appointments, and circus performances. If any professor of zoology had been asked to help, and means had been given him to employ a couple of real entomologists, they would have tracked down the mites to their lairs in less than one season.

The radius of flight of our bees does not extend ordinarily more than two or three miles in any direction. It would be a waste of time to work a thickly wooded district, or any highly cultivated one. But the heather regions of Yorks and Scotland offer districts with a very restricted flora. The mite reservoirs could be easily found in the few species of plants that exist there, or in the soils, or even in the manures employed.

"It is true that the discovery of the mites as the cause of the 'crawling' trouble only dates from 1920, and published details were not available before March, 1921. But two years have elapsed, and the only visible result is a patented 'crawler' trap. Ye Gods!"

Freda came to announce tea was served, and the adoring twins raced their father to the lawn. Mrs. D.B. and I followed more sedately.

"I have glanced through the report on the 'Isle of Wight Disease in Hive Bees,' Mr. Week-End, and it is such a convincing and impressive piece of work that you must have been joking this morning when you asked us to help. What a happy feeling exists in scientific circles! All the papers end up with highly commendable expressions of good will and thanks to colleagues and associates. Miss Harvey and Mr. Bruce White are now, I suppose, enjoying high honours and remunerative positions in the University of Aberdeen?"

"Human nature, dear lady, is very much the same in any station of life. You will find the same percentages of good and bad, virtue or crime, hatred or goodwill, in art, finance, science, medicine, church, law or business circles as you will in any trade circles that are not classed as 'high brow.' It is only a natural and pious idea to hope that talent and industry should meet a suitable reward. But things go oft agley. It is my private opinion, dear lady, that the two talented researchers had to flee for their lives."

"I wish you would be serious for once, Mr. Week-End. Where are they now?"

"Where do all good Scots go to, dear madam?"

(To be continued.)

A Return to Apiculture.

By Herbert Mace, Author of "A Book About the Bee."

(Continued from page 497.)

I left this swarm in the shade and hived it in the evening, when I had a little leisure. Having been introduced to this bee garden, I naturally had a look round. I found one stock in a frame hive and two in soap boxes of such small dimensions that the bees were hanging out in sheer idleness. It appeared that one previously called in to assist had stated it was not worth while hiving bees in frame hives now there was so much disease about. For sheer pity's sake I volunteered to try and put matters right the following day if a hive were prepared with frames for me. I did this in the middle of the day, and it was one of those spectacular operations which excite amazement in the uninitiated, especially as it has always been my custom, at any rate during the swarming season, to work without veil and with sleeves rolled well up. As I levered up the sides of the soap box, now covered with masses of bees, and passed a wire beneath it to sever the combs, the butcher stood with open mouth amazed at the sight of one cutting down a hive without coming to a violent end. "Not for fifty quid," he assured me, "would I do a thing like that."

A little later, a light broke in upon him. "Ah!" he said, "you've got something on you that keeps 'em off," and my smiling denials scarcely convinced him, I fear.

In spite of all my care, one comb broke down in each box, so laden with honey and soft were the contents, but having, for the time being, placed them over the brood chambers, I departed, with the broken honeycomb as a perquisite and the promise of greater rewards in due season.

Scarcely had I swallowed the midday meal after the hour or so I had spent with these bees, when the troubled lady who had first sought my assistance was knocking at the door to say that a swarm was in her laburnum tree. She was very apologetic. Did I think it worth while to try and get them? I assured her I would, at any rate, reconnoitre the position, and with the aid of a scarcely long enough ladder I was just able to reach the swarm. I endeavoured to shake it down, but as I had been obliged to climb into the tree and to stand actually on the bough upon which the bees were, the shaking was scarcely as vigorous as was desirable, for I did not want to shake myself off as well. However, a good lump of bees fell into the skep, so I brought it down and turned it over, leaving it to attend to more urgent affairs, but promising to come back later. In about an hour I did so, and found, as I had expected, that the bees had returned to the bough, though probably the necessity for reassembling had to some extent delayed a possible departure.

After studying the situation a little, I shifted the ladder to a position I thought slightly more advantageous, and ascended it once more. I was still by no means confident of being able to shake with sufficient vigour, and the necessity of having something more reliable than my eyebrows to cling with made

it impossible to brush the bees off. The only alternative was to cut off the bough, which was not very thick. A saw was at hand, but doubting the feasibility of holding the branch firmly when severed, I called for a piece of string with which to secure it to an adjacent bought before cutting. String seemed more difficult to obtain, and a considerable time elapsed before it was forthcoming. At the precise moment when I was about to reach down for it, I heard that peculiar sizzling noise which seems to be the well-understood signal for the swarm to rise. Hastily dropping the saw and seizing the skep, I shook with vigour, but it was too late, and I only succeeded in hastening the departure of the swarm. For the space of time it required to descend the ladder, they hovered about the tree, and then moved steadily away to the North. Having calculated the line of flight, I set off, carrying the skep, being obliged to dodge down several turnings which would bring me out on the line of flight. I came up with them as they were rising over the church roof. Beyond that was a taller building, a school, and they rose still higher to get over this. By the time I had passed round they were ahead of me again, and in crossing the fields beyond, I tripped over a wire. When I had picked myself up, the swarm were out of sight and sound, high in the air. This indicated that they were bound for a place beyond the river, and as this was half a mile distant and there are no means of crossing at this point, I was obliged to abandon the pursuit. As it happened, a look round the lady's apiary convinced me that wherever the swarm came from it was not from one of her hives, which were all working steadily, and a couple of days later my opinion was confirmed by her once more coming to say a swarm had left one of her hives and was hanging on an apple tree.

This was a case which presented little difficulty. It was a big swarm, and as the stock from which it came was working in supers, I arranged a brood chamber with sealed brood and empty combs, adding a new shallow frame rack and the sections and removed the part containing queen cells, for the formation of nuclei.

A week had passed since I placed the soap boxes over the brood chambers, and I thought that, under such conditions, it was likely the queen had gone below, so I snatched an hour before lunch to take a look in the hives and put on excluder. I turned up the first box and examined the combs, finding no sign of eggs in them, and soon being convinced, by the excitement among them, that the queen was still in the box. It seemed a pity, having gone so far, to have to do the work again, so I started driving the bees from the box. They bubbled up fairly quickly, and only a few minutes passed before I saw the queen run up—and down again. I had two or three similar glimpses of her without being able to reach her, and then she resolutely declined to show up. I had, in fact, not only to drive all the bees out, but actually to break away two combs before I could drag her from her hiding place. In all, nearly two hours had passed ere the job was finished, and it was too late to try and do anything with the other stock.

Shortly after lunch, when I had settled down to work again, the lady appeared again. There was nothing wrong this time, but a young man had come to say there was a beautiful swarm hanging close by, and she thought perhaps I might like to have them.

I decided that I would, and, skep in hand, joined the young man, though I found the "close by" was the better part of a mile and the "beautiful swarm" only a cast about a pound or so in weight. I shook it in, but the day was hot, and although I broke off branch after branch as bees reclustered, it was some time before the number of flying bees ceased to be worth considering. I took the skep, tied up in a cloth, and stood it in the shade near my first hive, gave the man half a crown, and bothered no more about the matter till seven o'clock in the evening.

I then carried down a frame hive, duly prepared with combs, and shot the lot in front of it. There was a steady move towards the entrance, but as I scanned the mass closely for the queen, I became conscious of the fact that the flying bees were increasing, and glancing up saw that many bees had entered the other hive and fighting was in progress. I was in a quandary, for I had not a single appliance with me, neither smoker, flour, water, or anything with which one usually copes with such situations, and although I closed the hive entrance, the mischief was done. The queen had evidently taken wing at the first shake and entered the other hive. Could I have secured a frame of brood I might, perhaps, have kept the remaining bees together, but in the absence of subjugators of any kind, it was scarcely expedient to open the supered hive with an angry crowd flying around. Sadly I watched the remainder of the cast circle off again before opening the hive to see the intruders being dragged out in scores. A plague o' this "summer time." Had it really been 7 o'clock this would hardly have happened.

I felt determined not to lose all these bees, so I took a stroll across the fields to the place where I had taken them, and found about a pint clustered there. These I shook into my hat, took home, fed liberally with thin honey, and put in the roof of the hive, sprinkling scented syrup over them and the bees which came up to investigate. I added thus a few bees to the stock, certainly not half a crown's worth. It was a sad tragedy to round off my reintroduction to apiculture.

John Geddy of Hilltown.

In this paper there are two errors for which I am responsible and I beg leave to correct them. Eastington, where Samuel Mew succeeded William as Rector, is described on page 402 as a "thriving town." Substitute "rural district about ten miles from Gloucester." Though of some importance, Eastington does not contain any great collection of houses, and probably never did.

On page 438 the name of the lady who translated De Gélieu's "Le Conservateur des Abeilles" should have been Stirling Graham, not Graham Stirling.

H. J. O. WALKER (Lieut.-Col.)

The Birth of a Queen.

During the stormy and thundery weather of last week I lost a small cast from a strong hive, together with the old queen. The cast must have issued from the hive during my absence, and thus I had no knowledge of it till the end of the week when I went through the hive and missed her majesty, and also found no eggs or larvæ, only sealed-over brood. There were several queen cells though in various stages, and whilst I watched I saw a wonderful and marvellous sight—the young princess cut the top off her cell and emerge.

First of all there was a faint quiver, as it were, of the cell, then the antennæ appeared as the princess delicately sliced off the lid and stood at the mouth of the cell, looking round on her new kingdom, watching with interest the hurrying throng of her citizens, each intent on its work.

The bees who were near to this queen cell seemed for a moment to fall back, as though doing obeisance to royalty (as doubtless they were), and then they came forward to render service to their new ruler. They cleaned her down well, combed her with their antennæ, and affectionately made her welcome.

Surely this birth of a new queen and her reception by her subjects is one of the most interesting and instructive sights that a bee-keeper can see. For what marvellous intelligence it must be, at work in the hive, that maps out all the work, and directly the hive becomes queenless, sets to work to rear a new queen, that wonderful instinct most fittingly described by Maeterlinck as the "Spirit of the Hive."—M. G. Kennedy Bell, 53, Hornsey Lane Gardens, Highgate, N.6. October 8, 1922.

The Season in N. Yorkshire.

Here in N. Yorkshire we have had a very disappointing year. I got a few sections at the end of May, and in early June the weather broke.

Since then excessive swarming has been the rule. The heather has bloomed in an extraordinary way. Some was in flower early in August, and only last week it had not ceased putting forth flowers and buds. The rain, however, seems to have washed the nectar out. One bee-keeper who sent over 30 stocks to within half a mile of this removed them last week with the remark that they contained less honey than on arrival.

Many bee-keepers in this neighbourhood are small cultivators who reckon that their bees will pay at least a portion of their rent, but this year the cry is practically universal that there is not a pound of honey to sell. They were hard hit some years ago by bees being sent to the moors in a diseased condition, with the result that most stocks in the neighbourhood perished.

A few days ago, when removing racks and making up for winter, I noticed that some stores were not sealed as usual.

Though an old bee-keeper, I have only a few hives, and do not sell bees or honey, so have had no experience in despatching them.

Two years ago I bought a swarm from an advertiser in Surrey, and this year a driven lot from Wiltshire. In each case I warned the seller that the bees had a long journey in front of them.

The former was despatched on a Saturday, and arrived at my local railway station 4 p.m. Monday. In each case quite half the bees had perished on the way.

Surely a little forethought on the part of the seller would be an encouragement to buyers in distant parts of the country.

A. H. Meysey Thompson.

Lastingham, October 16, 1922.

Notes from Gretna Green.

The past season has been entirely against honey production, very little saleable surplus being secured, and as most colonies required heavy feeding to keep them alive, it is evident that bee-keepers have been hard hit in 1922. It is interesting to conjecture how the honey bee in a state of nature would have survived such a season. Probably by the most vigorous colonies robbing out all others in the vicinity, thus augmenting their own stores, and, incidentally, ensuring the survival of the fittest. At many times in the dim remote past the honey bee must have met and grappled with problems that threatened her very existence. Famine and disease might destroy innumerable colonies, but always a remnant remained to again increase and multiply, for nature is ever mindful of the race, although at times careless of the individual.

Even the mysterious Isle of Wight disease has failed to wipe out our native British bee, although as "no cure is known," the race, theoretically at least, should now be extinct. It is quite well known that even yet the scientific investigators are not agreed as to whether *Tarsonemus woodi*, or something else with an equally formidable name, is responsible for the malady we know as I.O.W. disease. Any of them may be the *direct* cause, but there must be an ulterior cause as well, and recognition of this fact is essential to a clear understanding of the whole subject. An appropriate analogy can be found in the case of that well-known affliction, influenza. Given contact with the "flu" germ—*and the soil of one's body is a suitable condition to cultivate that germ*—there is very little chance of escape. Therefore, as our bees cannot be completely guarded against contact with disease, we must concentrate on the second factor, the condition of the soil, i.e., *the resisting power or stamina* of our colonies. Stamina is an inherited trait, and individual colonies may inherit either the stamina to resist disease or the tendency to acquire it under certain conditions. And stamina being inherited, it must be obvious that if the parents are lacking in this respect their offspring will be similarly deficient.

My own experience is that if the queen and drone parents are of unrelated stock, and reared under suitable conditions of nurture and environment, their progeny will inherit

full activity of nutrition and function, be exceptionally vigorous, and resist disease.

No success has attended the constant efforts to find some chemical compound which, introduced to the system of the honey bee, will destroy the mites without similar fatal results to their host. We do not hear of the medical profession adopting such very extreme measures in dealing with the influenza germ. Doctors cannot cure even a common cold; all they can do is to assist the patient's recuperative powers in throwing off infection, for nature, if not obstructed, effects her own cures.

The same principle is applicable to the inmates of the hive, and it follows that treatment is not a matter of killing mites, but rather of eliminating them by making the soil unsuitable for their growth and propagation.

To recapitulate, it should be clearly understood that the mites do not *cause* I.O.W. disease, but are themselves the *effect* of diseased conditions arising through inherent or acquired faults in the queen.

This recognised, it will be seen that treatment must take the form of removing the primary cause (faulty queen) and the effects (mites) will disappear, through sheer inability to make any impression on the vigorous offspring of a more virile mother bee.

J. M. ELLIS.

Sussex Notes.

It is now some time since I have been able to write a letter for the BRITISH BEE JOURNAL. I was away from home for a month during May and June in Germany and Belgium, consequently I had to trust the care of my bees to a stranger, and he being a busy man, could not spare much time to look after them. And my gardener informed me on my return that six swarms had taken place. And most of them disappeared into space.

At that time it was not only extremely hot, but the heat was apparently too much for the production of nectar, at any rate no honey was produced in the sections though the bees were strong in the hives, and finding the heat intolerable they took to swarming. This complaint was, I find, very general, and no success was obtained by any bee keepers in this part of the country that I can hear of.

Then came a time when the weather became unsettled, constant showers of rain certainly saved the situation. As regards the crops, especially the hay crop, it was altogether against bees working, and what honey was made went to the up keep of the inhabitants of the hive. This was followed by a dry spell, and the white clover, of which there was an abundance, quickly dried up. The flowering of the blackberry and ling has also been unfavourable, and bees have had to forage far and wide to get the brood chamber and young bees kept going.

Last week I decided to take what honey there was in the sections and caps of my two skeps. It was a very disappointing piece of work, and I found the greatest part of the sections had been severely let alone, though the frames in the brood chambers showed a very large supply, being well filled. This I did not touch, and as far as I can judge it will not be necessary to feed before the beginning of next year. Altogether, I have realised from two skeps and four hives between 30 and 40 pounds of extremely good honey. But that is the entire production for the year, and a very disappointing year it has been. Had I not taken the honey now it would all have disappeared in the course of the next fortnight, for the weather has again turned unsettled, one day fine, another wet. Last year was a bad one, and this year it has been worse. It is only in May and June that one can look for a honey flow, and that only with warm nights and heavy dews, then it is that the nectar in flowers is really distilled and bees can fill up their combs at a very rapid rate.

This year I have not used excluders in any of the hives, and in no instance has the queen laid any eggs in the sections. Certainly the test has not been a satisfactory one, as but few sections have been worked and no absolute certainty that the sections would be let alone unless the year had been so good that racks would have been filled throughout. Anyhow, not using excluders renders the passage to and from the sections much easier for the bees.

The bees that took up their quarters last year in one of the chimneys of my house came to a bad end, and died either from starvation or cold. The latter I should think, for a few bees showed up early in the spring, and after a few days disappeared. Take it all round I was not sorry that a permanent bee colony has not resulted in my dwelling-house.

I am afraid that there is not much progress on the part of householders in this part of the country in keeping bees, and I only know of one more aspirant who has joined our ranks in this parish during the past year. One does not see the hives or skeps in the gardens when travelling about the country, at least not to the extent one would expect to see. Times may change, and perhaps as people get more settled, and money more plentiful, more honey will be produced, and we shall yet see the golden sovereign again in circulation! Perhaps! And let's hope in our time!!

M. TWEEDIE.

Beckley, August 25, 1922.

The Season in Scotland.

The Scottish Beekeepers' Association reports a very unprofitable year for the industry. The season began with great promise, with some fine, warm, genial weather in May, with a rich flow of honey from the abundant fruit blossom, and swarming earlier than usual; but these conditions were of short duration. From early June onwards, the summer has persistently continued cold and cloudy, although the rainfall has not been excessive. Both clover and heather failed to secrete much honey, and the bees, however industrious, could only make a bare living, and in many cases united assistance will be needed. There is very little good Scotch

clover honey on the market, and it is fetching 2s. 6d. to 3s. per lb. The heather bloomed about three weeks later than usual, and hives are only now being brought home, and their gain in weight since being taken away is very disappointing to those who take the trouble and expense of moving their hives. Those who have any good heather honey to market will easily get 4s. to 4s. 6d. per lb. for it, and there will be no profit from this deserving industry this year, but in most cases a loss, seeing that both sugar and appliances keep high in price.

October 4, 1922.

British Bee-Keepers' Association.

The monthly meeting of the Council was held at 23 Bedford Street, Strand, London, W.C.2, on Thursday, October 19, 1922.

Mr. W. F. Reid presided, and there were also present: Mrs. M. K. Hodson, the Misses M. D. Sillar and M. Whyte-Johnstone, Sir Ernest Spencer, Messrs. G. Bryden, G. J. Flashman, J. Herrod-Hempsall, J. B. Lamb, A. Richards. Association representatives: Col. Kettlewell (New Forest), R. R. Babbage (Middlesex), C. M. G. Winn (Essex), E. G. Waldock, and W. E. Hamlin (Surrey).

The minutes of the previous meeting were read and confirmed.

Letters of regret at inability to attend were read from F. W. Watts, C. L. M. Eales, F. W. Harper, Rev. E. F. Henming, Rev. E. J. Bartleet, J. Price, and W. H. Simms.

The report of the Finance Committee was presented by Mr. Bryden, who stated that receipts for September were £12 5s. 9d.; payments during September were £40. The balance in hand on October 1 was £66 19s. 9d. Payments amounting to £52 9s. 6d. were recommended.

Reports on Preliminary Examinations were presented, and it was resolved to grant certificates to the following: Mrs. M. Sheridan, Mrs. K. Mansell-Pleydell, Misses A. Bickford, M. Plowman, Messrs. M. O. Wheadon, E. Tovey, W. Cribb, H. E. Gwyther, G. Dixon, H. J. Stevens, C. W. Phipps, A. Willmott, W. E. Hobbs, and H. F. Swan.

The report of the Examining Board was presented by the Chairman, and it was resolved to grant Honours Certificate in Lecturing to Messrs. J. Price and D. Wilson. The arrangements made for the Intermediate Examination were also confirmed.

Correspondence was read from the Royal Agricultural Society of England, placing the management of the Hives and Honey Department once again in the hands of the Association.

The Hon. Secretary was instructed to write to Mr. Eales a letter of sympathy, and the wish for a speedy recovery from his operation.

The Hon. Secretary gave a brief report on the visit of Mr. Richards and himself to the International Conference at Marseilles. The full report to be given later.

It was also resolved to send a letter of thanks to Mr. W. Wilson, thanking him sincerely for his courtesy in meeting and arranging for the comfort of the delegates at Marseilles.

Col. Kettlewell was deputed to see the chief of the Boy Scouts with regard to assistance in the bee-keeping branch being rendered.

Next meeting of Council, November 16, at 23 Bedford Street, Strand, London, W.C.2.

The Royal Show.

Our readers will be pleased to know from the report of the last Council meeting, given above, that the B.B.K.A. are to undertake the Hives and Honey Department at the Royal Agricultural Society's Show next year. The great disadvantage of this show is that it is too early for much of the current year's honey to be shown, and exhibitors have to fall back on that of the previous year. It is unfortunate that the season this year has been so bad, but we trust all those who can do so will save some honey for competition at "The Royal" next year. The Association is anxious that it should be a success, and this can only be attained by the help and co-operation of bee-keepers generally.

Kent County Honey Show.

The above was held at the Crystal Palace on September 28, 29, and 30. The total entries were 450, and an encouraging feature was the number of entries received from distant counties. There was a fine display of appliances by Messrs. S. J. Baldwin, of Bromley; C. T. Overton & Sons, of Crawley; and Davis & Leaney, of Goudhurst, Kent.

The large amount of spade work and organisation incidental to such a honey show were smoothly and efficiently carried through by the very capable hon. secretaries, Messrs. W. E. Clifford and E. R. Seadon, both of whom have been indefatigable in their efforts to make the show a success, and to these efforts the success of the show is mainly due. They were assisted by a hard-working committee, each member of which did his best to back up and help the Secretaries.

It is hoped to co-operate with other County Associations next year to increase to a much larger show. The assistance of the Crystal Palace authorities was admirable, and they promise greater support for future occasions.

The awards were as follows:—

COUNTY CLASSES.

Three Sections.—1, Miss Clark, Brasted; 2, H. Davis, Crayford; 3, Mrs. Shrubsall, South Croydon, v.h.c., G. J. C. Vincent, Anerley.

Three Jars of Light Honey.—1, H. Davis; 2, G. Thomas, Suffolk; 3, G. J. C. Vincent; v.h.c., T. Head, Canterbury.

Three Jars of Medium Honey.—1, G. J. C. Vincent; 2, T. Head; 3, M. J. Hammond, Beckenham; v.h.c., H. Davis.

Three Jars of Dark Honey.—1, H. Davis; 2, E. E. Brown, Sydenham; 3, C. C. Elam, Canterbury; v.h.c., W. J. Martin, Eltham.

Three Jars, any colour.—1, R. G. Hatton, East Malling; 2, G. J. C. Vincent; 3, Mrs. E. A. Smith, Park Langley; v.h.c., Miss V. Worsley, East Malling.

Three Jars Granulated Honey.—1, M. J. Hammond; 2, Mrs. D. Kennedy, Tankerton; 3, G. Thomas; v.h.c., Miss M. T. Heale, Barming.

One Section (gift).—1, Miss Clark; 2, A. Dewey.

Wilmington; 3, T. M. Taylor, Newenden; v.h.c., H. Davis.

One Jar (gift).—1, L. W. Matthews, Crockenhill; 2, Miss Macrae, Walmer; 3, G. Thomas; v.h.c., A. Dewey.

Display of Bee Products.—1, M. J. Hammond; 2, E. E. Brown.

Display of Articles of Food.—1, Mrs. E. R. Seadon, Bromley; 2, Mrs. D. Kennedy; 3, Mrs. Hammond, Beckenham; v.h.c., Miss Hammond.

Beeswax.—1, W. J. Martin; 2, G. J. C. Vincent; 3, E. E. Brown; v.h.c., L. W. Matthews.

Bee Candy.—1, W. I. Hawkins, Beckenham; 2, G. J. C. Vincent; 3, P. C. Thornton, Bromley; v.h.c., M. J. Hammond.

Plain Honey Cake.—1, Mrs. E. R. Seadon; 2, Mrs. D. Kennedy; 3, Mrs. A. Dewey; v.h.c., Mrs. Davis.

Home-made Appliance.—1, E. E. Brown.

Two Shallow Frames.—1, Mrs. Webb, Dover; 2, E. E. Brown.

Observatory Hive.—1, E. E. Brown.

OPEN CLASSES.

Beeswax.—1, F. Harris, Lincoln; 2, E. E. Brown; 3, W. J. Martin; v.h.c., T. Head.

Six Jars Light Honey.—1, G. Thomas, Suffolk; 2, R. W. Lloyd, Norfolk; 3, A. Dewey; v.h.c., E. Bliss, Bedford.

Six Jars Medium Honey.—1, A. Berrisford, Staffs; 2, G. Thomas; 3, C. H. Rose, Sussex; v.h.c., Miss V. Worsley, East Malling.

Six Sections.—1, G. Evans, Salop; 2, Mrs. L. Herbert, Wonersh.

One Jar Light (gift).—1, G. Evans, Salop; 2, Mrs. L. Herbert; 3, W. H. Dawsett, Darenth; v.h.c., W. J. Tyrrell, Staines.

One Jar, any colour (gift).—1, Mrs. L. Herbert; 2, Miss Macrae, Walmer; 3, L. W. Matthews; v.h.c., E. Brown, Folkestone.

One Section (gift).—1, G. Evans, Salop; 2, Mrs. A. Dewey; 3, A. Dewey; v.h.c., H. Davis.

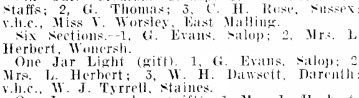
Trade Appliances.—1, S. J. Baldwin, Bromley; 2, Messrs. C. T. Overton & Sons, Crawley, Sussex.

Mead.—1, Mrs. D. Kennedy.

The Barnes Cup, awarded to the competitor securing the highest number of points in Classes Nos. 1—16, was again won by Mr. E. E. Brown, of Sydenham, which secures him the trophy outright.

The Medal of the Apis Club was awarded to Mr. H. Davis, Crayford.

(Communicated.)



Hubam Clover.

[10705] As correspondents in the last two issues of THE BRITISH BEE JOURNAL have invited other growers of American sweet white clovers to record their experiences with these plants, I trust the following notes will not come amiss.

On a plot about one-eighth of an acre in extent I sowed Melibotus Alba on Easter Bank Holiday, 1921. Owing to the drought the plant was patchy, so I cut and fed it to my cattle in August, and subsequently dug in the roots in November. These roots began to sprout this year in early March, and by the end of June I had a profuse growth of 7 to 8 feet in height, upon which my bees worked incessantly till, in order to save some fruit trees which had been planted in the same plot, I was forced to cut it.

Side by side with this I sowed during the first week in April this year two plots with what was stated by the vendor to be Melilotus Hubam seed. I do not for a moment impugn this gentleman's integrity—he is well known to readers of the B.B.J.—as he has courteously sent me the invoice of the seed which was sent him from the United States. Of the two plots sown, the smaller was dressed with lime, while the larger, some 300 square yards in area, and sloping steeply towards the east, was merely forked over, and the seed raked in. In both cases germination was slow, though less so on the limed plot, and the percentage of germination high. The plants shot up quickly upon the advent of the recent July rains, and by the end of that month were 5 to 6 feet high, at which time the first flowers appeared. I cut both plots on October 4, the plants being then 6 to 7 feet high, and still in bloom.

But for the life of me I have been unable to detect the slightest difference between the M. Alba and M. Hubam, which accounts for my scepticism as to the identity of the latter. I have left a clump of it to see if it be truly an annual or not. If not, then I will know that I have yet to make the acquaintance of M. Hubam.

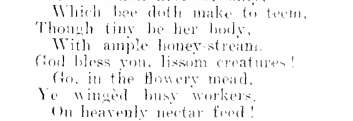
Whatever its correct botanical identity may be, I have no doubt as to its agricultural and apicultural value. Horses eat this clover greedily, and some I cut last year in early July was eaten almost as eagerly by my cows, though these do not relish it when the stalks become coarse and fibrous. My bees worked it incessantly, and to its presence here do I attribute the fact that my home stocks, as opposed to those which I took out in August on to the New Forest heather, have continued to gather honey till the end of September, as evidenced by the newly-filled cells of unsealed honey which I found at every recent examination of these home stocks. My bees were working freely on the few remaining flower-spikes on October 3, the day before the crop was cut.

H. W. KETTLEWELL (Lt.-Col.)

In the Bee-Line.

But one small hive-cot only,
Which bee doth make to teem,
Though tiny be her body,
With ample honey-stream.
God bless you, lissom creatures!
Go, in the flowery mead,
Ye winged busy workers,
On heavenly nectar feed!

ANTIPHILUS, of Byzantium: first century A.D.
Translated by G. R. Woodward, M.A.



Unsealed Stores.

[9945] I am a regular reader of the "B.B.J.," and I notice in your issue of Oct. 12, 1922 (10,702) you are inquiring about bees not sealing stores. About two months ago I looked through six of my hives, and found practically no food or honey, so I commenced syrup feeding at once, continuing feeding for about six or seven weeks, giving the six hives about 1½ pints of syrup per day. When

I again examined the hives the cells were full of syrup, including the brood nest, but scarcely any of the syrup was sealed, and scarcely any brood in the hives, although they were strong stocks. Of course, being a beginner, and consequently not much experienced, I shall be glad if you will give me advice through your next issue. I suppose it is now too late to open the hives again for examination to see if the food has been sealed up. What will be the consequence if it is unsealed? I have wrapped the bees in hives up as warm as it is possible to do.

G. S. BREARLEY.

October 20, 1922.

REPLY.—The danger from unsealed food in the combs in any quantity is that the syrup or honey, not being protected from the air, will absorb moisture from it, become thin, and ferment. It is the *fermented* syrup that is injurious to the bees. It is not too late to make an examination, and if there is a large quantity of unsealed syrup, it would be safer to extract it and trust to candy for winter food, or you may try the plan given by Rev. E. F. Hemming in his "Jottings" on page 507, "B.B.J." for last week.

Notices to Correspondents

Correspondents desiring an answer in the next issue should send questions to reach this office NOT LATER than the FIRST POST on MONDAY MORNING. Only SPECIALLY URGENT questions will be replied to by post if a STAMPED addressed envelope is enclosed. All questions must be accompanied by the sender's name and address, not necessarily for publication, but as a guarantee of good faith. There is no fee for answering questions.

"EBOR" (Dorset).—*Using old combs.*—It is quite safe to give combs on which bees have died from starvation, or that contain granules of honey, provided they have not been contaminated by contact with disease, and are otherwise in good condition. Those with cocoons, etc., of wax moth should be fumigated with sulphur fumes, but if much damaged it is better to discard them and give new sheets of foundation, as in repairing them the bees are apt to fill the holes with drone comb.

H. B." (Sussex).—*Failure with candy.*—The sample you sent is burned, and will not "candy." We once, years ago, tried a similar sample on some bees, and 12 hours later it was creeping out of the hive entrance. You might save it till spring, and then make it into syrup for spring feeding.

Bee Shows to Come.

November 15 and 16.—Honey Show of the Worcestershire B.K.A. Five Open Classes (two Gift Classes for single bottle, prize 20s. each).—Schedules from G. Richings, 100, Northwick Road, Worcester. **Entries close November 4.**

November 16, at Beverley, in connection with the Beverley and District Chrysanthemum Society's Show. Open Classes.—Schedules from T. T. Taylor, Hon. Sec., Beverley and District B.K.A., 137, Keldgate, Beverley.

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One Penny per Word.

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GOOD GLAZIER'S DIAMOND, perfect, 8s. 9d.; six solid Silver Teaspoons, 19s. 6d.—HUBBARD, Northkilworth, Rugby. r.k.45

STRONG PLANTS of Double Chamomile, Foxglove and Belladonna for Sale.—H. CHEESMUR, Forest Apiary, Worth, Crawley, Sussex. k.44

STRONG STANDARD LIME TREES, 8 ft. high, excellent for shelter and honey, 18s. per dozen, £6 10s. per 100, f.o.r. for c.w.o.—E. KING, The French Garden, West Ashling, Chichester. r.k.32

EXCHANGE, new Bee Appliances for Honey, Pullets, or Ducks, etc.—LONGLEY, 35, Tharp Road, Wallington, Surrey. r.k.34

THE World's Famous Raspberry, Lloyd George, perpetual fruiting, 10s. dozen, 60s. and 70s. per 100.—J. J. KETTLE, The Violet Farm, Corfe Mullen, Wimborne, Dorset. h.78

WANTED for the Continent, a Queen Breeder, methodical and capable of working to schedule time in producing queens in quantity; single person of either sex.—Apply, giving references, to BOX 93, BRITISH BEE JOURNAL, 23, Bedford Street, Strand, W.C.2. k.2

RASPBERRY CANES. Bath's Perfection, strong, fibrous-rooted fruiting canes, 5s. per 100, 25s. per 1,000, carriage paid; Sir Joseph Paxton Strawberry Plants, price as above.—A. SHARP, Halstead Farm, Barrowford, Nelson, Lancashire. k.41

WANTED, Light Car, Singer, Swift, or similar make, about 7 to 8 H.P. Wanted, 1 or 1½ H.P. Electric Motor, 1,000 revs., 110 volt.—W. HERROD-HEMPSALL, Old Bedford Road, Luton. k.42

SELL.—Two small powerful Acetylene Brass Head Lamps, with separate generator, suitable light car or cycle car, £3 the set; carriage forward.—HERROD-HEMPSALL, Old Bedford Road, Luton, Beds. c.77

BEES.—Shallow Frames, drawn out, wanted. Quote lowest price delivered.—SMITH, Shoemaker, Inverurie. k.40

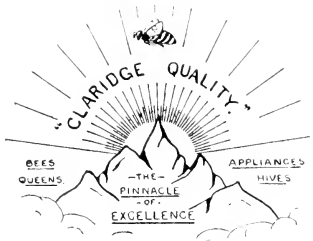
BUSINESS ADVERTISEMENTS.
1½d. per word.

THE WISE BEE-KEEPER looks for quality. The South Hampshire Apiaries breed only from the very best strains. Result: Quality and satisfaction. Beginners' Outfits from £5.—All communications, H. E. NEWTON, New Milton, Hants.

"THE CRUCIAL PROBLEM OF BRITISH BEE-KEEPING," by Dr John Rennie, F.R.S.E., F.A.C.—Copies of this instructive brochure may be now obtained from the "B.B.J." Office or direct from the APIS CLUB at 2½d. per copy, post free. k.45

CANDY.—4 lbs., 4s. 6d.; 7, 7s. 3d.; 10, 10s., post free.—HENSLEY, Luton Apiary, Chatham. r.k.47

ITALIAN QUEENS by RETURN OF POST. Tested, 9s. 6d.; Untested, 7s. 6d.—PEARSON & GALE, Marlborough.



F. M. CLARIDGE, Copford Apiary, Colchester.

TO ALL SECRETARIES and BEE-KEEPERS.—Send to me for samples of Honey for autumn feeding.—F. GOODRICH, 10, Weston Park, Crouch End, London. h.106

WINTER CANDY, medicated or plain, from pure cane sugar; 4 lbs., 4s. 6d.; 7 lbs., 7s. 6d.; 10 lbs., 10s.; 28 lbs., 26s.; post free.—STONE & CO., Wilson Street, Bristol. k.28

CANDY.—The very best, made from pure white cane sugar, in 1-lb. cakes, 1s.; 7 lbs., 7s. 6d.; 10 lbs., 10s. 6d.; post paid.—HARVEY, Apiarist, Andover. r.k.16

HONEY JARS.—Rounds, squares, caps and wads. Save money by sending for quotations.—BOWEN, Coronation Road, Cheltenham. k.46

"W.B.C." HIVES.—Make yours and save money. Simplified Working Drawings, 2s. 6d. Novice can understand.—CANDY, 28, Dovey Road, Moseley, Birmingham. k.43

SUPERFINE CANDY.—None better. 7 lbs., 7s. 6d.; 10 lbs., 10s., post free.—TICKELL, Westbourne Apiary, Cheltenham. r.k.49

BERKSHIRE HONEY, guaranteed pure, 1s. 6d. lb., in 7-, 14-, 28-lb. tins; tins and carriage free on 28 lbs.—DR. BELL, Lambourn, Berks. r.k.50

STRICTLY BUSINESS.—6 lbs. Flavine—S. B. Candy, 7s.; 10 lbs. Flavine Honey Sugar, 10s.; 10 lbs. Autumn Sugar Syrup, 8s.; all carriage paid to any address in Great Britain.—S. H. SMITH, 30, Maid's Causeway, Cambridge. h.25

HONEY FOR BEE FEEDING.—Australian, new, 60-lb. tin, 35s.; West Indian, new, 56 lbs. 38s. 6d.; Californian, old crop, 60 lbs. 30s.; carriage paid; reduction quantities; samples on application.—LONDON TRADING AGENCY, 32, St. Mary Axe, London, E.C.3. r.k.30

CANDY, 4 lbs., 4s. 6d.; 10 lbs., 9s. 9d.; larger orders, 9d. per lb., f.o.r.—COBB, 33, Bevan Road, Plumstead. r.k.26

TAYLOR'S SOFT WHITE CANDY.

Manufactured from guaranteed pure White Cane Sugar

1/- per lb., post extra,

or 4lb. parcel, **5/-** post free; 7lb., **8/-** post free; 10lb., **11/-** post free.

Special quotations for large quantities.

Feeders, Quilts and Winter Appliances of every description. Illustrated Catalogue post free on application.

E. H. TAYLOR, Ltd., Beehive Works, WELWYN, HERTS.

HONEY, in 28- or 56-lb. tins, finest quality, for Sale.—HARVEY, Apiarist, Andover. r.k.15

BEES REARED ON ALF- RYALL'S LINES keep well. Buy his advice.

"WIGHT" AND "ACARINE" DISEASES.—Prevention and removal; invaluable advice; 5s. 6d. "An eye-opener."—ALF. RYALL, 5, Ospringe Road, N.W.5. r.c.87

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HAVE YOU READ "THE BEE WORLD"? If not, why not? Every number in itself is a useful literary work for practice and reference. Specimen copy free.—Offices: THE APIS CLUB, Port Hill House, Benson, Oxon.

STEEL'S SUPER CANDY.

4 lbs., **4/8**; 10 lbs., **10/-**; carriage paid.
Special quotations for quantities.
STEEL'S BEE HIVE WORKS,
WEST ASHLING, CHICHESTER.
Branch: THE BEE HIVE, BEOYLE ROAD, CHICHESTER.

The products of the Apiary, of Poultry and Farm Stock, of the Fruit and Vegetable Garden can be Advertised and Sold through

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Get a Copy—Thursday and Saturday, 3d. The "Bazaar" publishes also practical handbooks by experts. Send for full catalogue, post free from **WINDSOR HOUSE, Breams Buildings, LONDON, E.C.2**

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FOOD FOR BEES.

Guaranteed Made of Pure { Medicated Syrup for Autumn Feeding ... ... 7 lb., 9/6; 14 lb., 16/-; 28 lb., 28/6
Cane Sugar (White). { " Candy " Winter " ... 1 lb., 1/-; 4 lb., 5/-; 7 lb., 8/-; 10 lb., 11/-

All Carriage Paid. Can we quote for Pure Cane Sugar. Any quantity supplied.

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The Premier Quality.

EVERY DAY we receive doleful reports from those who have purchased elsewhere and lost their bees through disease or want of vitality. Why not get the BEST, and be happy ever after?

List Free. 20 page Annual 4d.

Queenland, Heathfield, Sussex.

BEE CANDY.

Made from Pure Cane Sugar, and guaranteed free from Glucose. Prices:—

1 lb. at 1/-, post 9d. 4 lbs. 5/-, post free.
7 lbs. 8/- post free. 10 lbs. 11/- post free.

Special prices for large quantities on application. SYRUP in 7 lb., 14 lb. and 28 lb. tins.
Use the WORMIT Combined Feeding Board and Winter Cover, as advertised in issue of 24th August.
FEEDERS of every description. Full particulars in Illustrated Catalogue sent post free on application.

Dadant's New Patent Wired Foundation.

Supplied in the sheet, with wires embedded all ready for use.

SAVES TIME. SAVES LABOUR. SAVES MONEY.

Price only a little more than that of ordinary foundation.

Prevents sagging and gives a perfect comb.

Has been tested and proved for several years in hundreds of colonies.

Send for a sample pound and judge for yourself.

We are also making special frames to suit this foundation, but old frames, if in stock, can be adapted by the use of a special bottom bar.

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1922. ITALIAN QUEEN BEES. 1922.

October, 10/- each. "Specials" only.

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The Bee-Keepers' Calendar.

NOVEMBER, 1922.

2 Thursday. "Hush! the Queen Bee to her levee.
Buzz-a-buzz! With humming sport
From the blossoms in a bevy,
Calls her golden, glancing court."
A. P. Graves, "The Hood Hammock."

3 Friday. "My banks they are furnished with bees,
Whose murmur invites one to sleep." *Shenstone.*

4 Saturday. "But crystal springs and lakelets mossy green,
And tiny rivers slipping through the grass—
Make these your own; and let a palm-tree tall,
Or great wild olive, shade the bees' front-door."
Virgil, Georgics, Book IV.

5 Sunday. "Sunshine after rain!
How the flowers smile,
Drooping since awhile;
See them lift their heads on high,
Greet the bee as he draws nigh.
O the heavenly gain
Of sunshine after rain." *Anon.*

6 Monday. Plant flowers beloved by bees, so that you may have them near you and watch them at their work.

7 Tuesday. "A bee goes mumbling homeward pleased—
He has not slaved away his hours;
He's drunken with a thousand healths
Of love and kind regard for flowers.
Pour out the wine,
His joy be mine."—*W. H. Davies, "A Drinking Song."*

8 Wednesday. "The bee that through the sunny hour
Sips nectar in the opening flower."
Burns, "Philly and Willy."

Obituary.

JACQUES DENNLER.

It is with sincere regret that we have to announce the sudden death of M. J. Dennler, one of the leading pioneers of modern bee-keeping, which took place at his residence in Mutzig, Alsace, on September 11, at the age of 79 years.

J. Dennler was born on April 1, 1844, at the schoolhouse of Enzheim, in Alsace. His father was the schoolmaster, and it was at this school that M. Dennler passed his earlier years. Later, when his father retired, M. Dennler, in 1878, was appointed schoolmaster to succeed him, and kept this position until 1900, when he retired and settled at Mutzig.

M. Dennler commenced bee-keeping when he was only ten years old. In May, 1854, a schoolfellow of his made him a present of a swarm, and his father rather encouraged the son by building an apiary, and himself became interested in bee-keeping. Four years later, in 1858, the father and son had already thirty-one hives in straw skeps, such as were used in the country. But the honey harvest was always poor, so that from 1854 to 1867, during fourteen years, they only obtained

a surplus of 180 pounds in all. The largest quantity was fifty-five pounds in 1867. For five consecutive years they did not get a single pound of honey, although they always had from fifteen to twenty hives. Such an experience would have disgusted many a would-be bee-keeper, but M. Dennler was made of better stuff, and his energy and perseverance enabled him to become not only a master of the situation, but of the science also.

In his earlier days bee-keeping was in a very backward condition, and it was not until 1868 that a new era began to dawn in Alsace. M. Bastian, pastor of Wissenbourg, introduced bee-keeping with movable combs. M. Dennler was one of the first to adopt the new methods, to become a disciple of M. Bastian, and to propagate those methods. On October 1, 1868, the Alsace and Lorraine Bee-keepers' Society was formed, with M. Bastian as

THE LATE MONS. J. DENNLER.

Enzheim was not an Eldorado for bee-keeping, for it is situated in a waste plain, ten kilometres west of Strasburg, and about the same distance from the Vosges mountains. Here are a few fruit-trees in spring, rape in April and May, a considerable quantity of *Trifolium incarnatum*, artificial pasturages, a second cut of red clover—and these were the principal sources of honey supply. Since 1879, M. Dennler took his bees regularly to the heather in the Vosges mountains.

President. The society met in different localities, and in 1869, the meeting of bee-keepers took place in M. Dennler's garden, and he was elected chairman of the Strasburg section. The same year M. Dennler visited the congress of German and Austrian bee-keepers at Nuremberg, where he met Dr. Dzierzon, and other eminent bee-keepers, amongst whom were MM. Schmidt, Hruschka (the inventor of the extractor), and Hamet, all names well known to readers of THE BRITISH BEE

JOURNAL in those days. It was in this year that M. Dennler commenced writing articles on bee-keeping in the *Apiculteur* of Paris. The war of 1870 interrupted the progress of apiculture, but in 1872 the dormant energies of bee-keepers were again aroused, and another good start was made.

In 1873, M. Bastian started the journal called the *Elsass-Lothringischer Bienen-Zuchter*, and made M. Dennler editor, giving him as a colleague M. Zwilling, and appointing the two as lecturers in Alsace and Lorraine. Both German and French are spoken in Alsace and Lorraine; therefore it is necessary for the lecturers to know both languages, and it is for this reason that the journal is printed partly in French and partly in German. When we attended one of the meetings held at Colmar and were asked to address the bee-keepers present, it was in the two languages that we had to do so, that all might understand our remarks. M. Zwilling died in 1908, since which time M. Dennler had assumed the sole editorship of the journal.

M. Dennler was a frequent successful exhibitor, gaining numerous medals, and scarcely a year passed without his visiting some exhibition. In this way he visited Austria, England, France, Germany and Switzerland, and considered that he had been specially favoured in being able to study the various methods in the apiaries of the leading bee-masters of Europe. Amongst others in Germany with Dr. Dzierzon at Karlsmarkt, in Switzerland with M. Bertrand at Nyon, in France with the Abbé Collin at Nancy, and in England at our apiary in Horsham and Mr. Abbotts' at Southall. M. Dennler always referred with particular gratification about his visit to England, as it was at our country residence at Horsham that he met some of the leading bee-keepers in England, as well as M. Gravenhorst, of Germany, and Mr. Newman, editor of the *American Bee Journal*, of Chicago. It was also there that M. Dennler, M. Gravenhorst and Mr. Newman were each presented with a silver medal of the British Bee-keepers' Association as a souvenir of their visit to this country. When we look at the photograph of the group of twenty bee-keepers, all leading men of their day, it makes us feel sad to think that to-day all but one and the President of the B.B.K.A. are no longer with us.

M. Dennler, on his retirement to Mutzig, installed a model apiary of about thirty hives, which not only gave him handsome returns, but attracted many of his admirers who visited him for advice in their endeavours to perfect themselves in bee-keeping. He was also the founder of the society's library, unique in its way, and which has been of great use to its members.

As a writer, M. Dennler was well known to our readers, and his reviews of continental bee-papers which appeared in THE BRITISH BEE JOURNAL from time to time were read with much interest. He also wrote a number of useful pamphlets which appeared in several editions, also "Das Bienenwachs und seine Verwertung," which we translated and published under the title of "Beeswax, its Economical Uses and Conversion into Money." Other publications were "Die Wachsmotten," "Verwentung des Honigs im Haushalt," "Der Honig als nahrung und Medecin," "Hoch die Bienenzucht," and in French, "La Cire des Abeilles et son utilisation," "Le Miel et son usage comme aliment et medicament," and "La Fausse-teigne."

After losing his wife in 1893, and being left with two orphans, he married again in 1896, the union being a very happy one, for he not only found a devoted companion, but one who was equally with him passionately interested in apiculture, and who was able in a large measure to assist him in editing the journal.

By a curious coincidence, both M. Dennler and his wife were awarded at the same time the decoration of the cross of "Mérite agricole." M. Dennler was elected an Honorary Member of the B.B.K.A. at its last annual meeting in recognition of his services to bee-keeping. His sudden death removes an old and valued friend of long standing, and a man of extraordinary ability and activity to the very last. Our sincere sympathies, and, we are sure of those of our readers who remember him by his writings, are extended to his widow and daughters in their sorrow.

A Dorset Yarn.

Honey gathered from different areas in this country varies greatly in colour and taste. I was able to taste four samples of honey from California; one of them was said to have been gathered in the orange groves. It was from a five-ton lot that was bought with other large consignments, and was delightful in flavour, whilst the colour was a rich amber. The next best was from the sage districts, but all of them were of a very high order.

The Board of Trade returns give very interesting figures of imports of foodstuffs into this country, but we are mainly interested in honey—the figures run into many thousands every month; but then all imported honeys are not of such a fine quality as those I sampled. The importer said Australian honeys can be bought at a very low price, but they are inferior to this lot from California. At a farmers' market I saw a

sample of Queensland honey in tins. This is sent carriage paid to this market at 6d. per lb. It could be cut out in cubes; no moisture in it, and the taste was very inferior. As a member of the Board of Management I advised them not to have a large lot of it, even though a good profit was to be made by its sale.

We honey producers in our County Associations will have to get a move on to protect our own industry. Go where we will, where foodstuffs are shown in great quantity we see large exhibitions of foreign and Colonial honey. But few have any English honey to offer. Last year at the Grocers' Exhibition there was a lot from a Reading firm. This year the owner says he had no English honey to offer to the public, but he has tons of Colonial and foreign, lots all sold to him by small samples sent by post, with a guarantee that the bulk should be as sample. All these inferior grades of imported honeys must give the general public a poor opinion of honey as a food. I do not wish to run down the high-grade stuff, but the importer cannot sell this under the price of our extracted lots, and those who buy the cheap grades can never have any idea of what a delicious food the honey from our own loved land is.

I was able to take a tour through Hants, Surrey, Berks, Bucks, and Oxford on October 14 to 16. I thought I would like to see the large places where I worked as a boy. Stayed at Sunningdale, only a three-and-a-half-hour run with a car, but what a disappointment for me. The beautiful grounds and gardens were derelict; no money to spend on the place. It is in the hands of agents for sale. The bee house, which recalled my first acquaintance with the *Apis* family, was gone. The wild bees who had lived in the hollow tree (so the old men said when I was there) for generations were gone, but this was because the bark had covered over the entrance; bees could not get in or out. This aperture was a foot long forty years ago. The large arbutus, or strawberry trees, were in full flower, with crowds of bees over them (it was warm and sunny); all of them were blacks. There used to be a lot of them in the hollow roofs of the summer-houses, as well as many of them in the forests. This shrub plant must live to a great age, for these trees used to bloom and fruit every year when I was a boy. Here had been planted so many trees and shrubs, from all parts of the world, that it was a paradise for bees at all seasons of the year (at least, when all is fair for them). The trees are still there, the wild bees can "sip the sweets from every flower," though the paths get filled with bramble, bees will have their fill. The flowers will go on "as long as the sun and moon endureth." This was one of the show places of the home counties, with its miles of pleasure drives through woods and flowers, for there were miles of rhododendrons and azaleas that had seeded and extended till the place in their seasons was a blaze of colour. J. J. KETTLE.

Jottings from Huntingdonshire

A further week of sunshine. Not a day but what Old Sol has revealed himself in his power. I have seen more blue sky this latter half of October than I saw during the whole of last July. The wind still comes from the north, and therefore brings shivering nights. These sunny days are helpful to the apiarist; he is better able to walk around and learn from the alighting board the condition of the bees within the hive. As the lengthening shadows tell of shortening days, so, too, does the alighting board tell of life and strength among the bees. The boards showing hurrying pollen-laden bees speaks for itself, as also does the sight of bees distressed, flying they know not where, crawling under the eaves, poking about the lift joints and spreadeagling about the entrance. One speaks of happiness, the other despair. Requeening is, or should be, accomplished in every case ere now, but despite the unwisdom of opening hives in November, if I discovered that through some unforeseen occurrence a good stock lost its queen in the eleventh month of the year I should not hesitate to requeen if a queen were available. The secretary of our County Association once requeened a stock in December, with happy results.

Now is the time to begin overhauling empty hives and supering crates. Most of the latter, being removed practically empty, should not present any great difficulty. One thing we should bear in mind; bees do not like dried-up wax to work upon. Therefore, those who placed a rack of sections on their hives in spring, which, owing to the bad season, the bees did little else than occupy, will find the weed foundation dried to brittleness. To put it back in this condition next year would be futile. Even if the bees did enter the sections, they would start building cells from the edge of the wood and leave the foundation severely alone. To renew the foundation is to risk the breaking of the section woods, and they are too expensive to be lightly considered. The better way is to spray the foundation with Yadil syrup before placing away for the winter. This is the only thing I know which will moisten the wax without causing mildew. In early spring they will be ready for a sun bath. A capital plan is to place them out on grass, if this be available, and as early in the morning as your bed will consent. The early morning dew will help to toughen the wood, and the increasing strength of the sun's rays will soften the wax sufficient to make it attractive to the bees. Warming the foundation before a fire will serve the desired purpose, but this takes up more of one's time, and one has to be careful lest the warmth be too excessive and destroy the hexagonal impress of the foundation. While on this question, may I preach one more sermon on the folly of filling section squares with full sheets of foundation? This not only leads to buckling, but gives the bees the trouble of eating portions away to enable them to get to the other side. Since some bees will not

work in sections without pop holes, it is best to give them these, and the proper place is in the middle. A pop hole in the middle the bees will fill up when the rest of the section is complete; pop holes in the corner are invariably left unfilled.

Harking back to the question of assisting bees to cap their stores by placing hot-water bottles and hot bricks over the brood chamber, do not overdo it. Many wish to know how often hot-water bottles should be changed. My reply may surprise some. The first hot-water bottle, well wrapped in flannel or a piece of an old blanket, should be put on about 3 p.m., and the next about 9 p.m. Although a bottle well wrapped retains warmth for 10 to 12 hours,I do not advise bottles being on the frames during middle day, unless the weather be unusually cold. Artificial midday heat will stimulate breeding, and if this is started it means continuing the hot bottle treatment for three weeks or a month, and if one missed a day! I have never tried this method as a means of stimulating oviposiling within the hive, but a reader in Middlesbrough tells me he has done it with much success. Thus *docendo discimus*.—E. F. Hemming, Steeple Gidding.

Week-End Bee-Keeping.

By S. H. Smith, Cambridge.

(*Continued from page* 520.)

After tea I went to the workshop for some paraphernalia, and on going to the hives I found D. B. all alone there. "The ladies have retired to study the books," he informed me, "and the orders are that you are to stay after we get through with this job. I suspect some plot is brewing. You want the mites chased to some yet unknown lair; I have a sneaking liking for your pet aversion—a 'cure'—or, at least, direct action in the hives: the others may have other plans. So look out. When the ladies aim at something there is no telling just where and what they will hit."

"I rather value their co-operation in anything demanding simple and sane views, D. B. We men use telescopes and search far horizons when the object sought is often right under our noses. They take short, direct cuts by intuition, whereas by reasoning we often go miles out of the way to avoid imaginary difficulties. The one thing that consoles us for their absence is that we shan't have to talk quite so much." D. B.'s answer was a loud "Hear, hear."

"While we are at it, we may as well overhaul No. 1 and put things shipshape for wintering. Then we will turn ourselves loose and spray, smoke and insert pads in Nos. 2 and 3. And No. 3 gets a young, fertile queen. Yes, I brought one with me.

"All the same the chances are less than 10 to 1 that we shall do much good to the bees in No. 2 so late in the year. We may save some bees and the queen until spring, but will she be any good if there next year? Should her vitality be sapped by the mites, it is only a waste of time and good food. Then why did I not come out with this before? Now, I ask you, old man, how could I possibly put on the black cap when facing those three pairs of adorable and appealing eyes?

"Softie? All right. Balmy in the crumpet? Maybe. All of us have our weak moments. Forget it. Come on, there is plenty to do.

"We will puff a little medicated vapour into the entrance of No. 1. We may as well use up the cartridges I brought. Why, hang it all! The top brood-chamber has nothing but empty combs. The blessed bees have been eating their heads off or else they have been rearing brood to beat the band. Well, as you say, we have ten beautifully drawn-out combs good for next year. Let us bump off the few bees on them in front of the hive.

"The second brood chamber has four fully sealed combs, two at each side, and the others are partly filled. Take the excluder off the lower brood-chamber, please, when I lift off this one.

"Some weight all right, but not so much as I expected. There are plenty of bees below. The four centre combs have good patches of brood, and there is more or less honey and pollen in the others. Figuring roughly 5 lbs. of honey to a solidly filled comb of British Standard size, and estimating the partly-filled combs accordingly, what do you make the total weight of the honey stores in No. 1, D. B.?

"Between 30-35 lbs.? I agree with you, and we will leave the lot. Extravagant? Don't you believe it. There will not be much left by May, and if we work this stock on the intensive plan then—double, divide, and sell—the same as we did this year, we shall not regret it. Surely two bad seasons will not come in succession in Cambs. With any kind of luck we should get a honey crop next year.

"You can see now, D. B., that without two dividends per annum from bees you cannot make much of a commercial affair of bee-keeping nowadays. We have to dig too deep in our pockets to support useless armies of squandermaniacs. Just fancy giving big salaries + bonuses + pensions to gangs of Government loafers! Talk about parasites! What are mites compared to political bounders?

"All right. I just wanted to say that bribery and corruption are right under our noses. A public office should be a public trust, not a private graft. We must learn to punish political rascals.

"All right! Keep calm. I wasn't shouting! No! Don't replace the excluder. Let the bees from now on have a free range and run their domestic affairs to please themselves. They will keep busy and happy arranging and rearranging their honey stores. Having a good queen and plenty of brood and food, any robbers that come around will not get within sniffing distance of their honey cells.

"Well, there's No. 1 off our minds. There are sufficient quilts, but if you care to add a couple of newspapers later on they won't do any harm. And don't forget, D. B., that 'tis

No. 1 stock paid us £3 15s., less some small charges. Au revoir, No. 1, and may you be there, hale and hearty, in the spring of '23.

"Poor old No. 2! Yes, we'll spray the bees, as they are all in by now. The few 'crawlers' in the box we shall cremate, and it is just as well the 'eyes' are not present. We shall lose probably 25 per cent. of the bees, but if crawling ceases by next Saturday, September 2, we may give them a little brood from No. 3 to cheer them up and to start them on their way again. I'll fill the sprayer, and we will give it to them good and strong."

For some minutes queer noises had been coming from the direction of the house, and D. B. was listening to them more than to me.

"It seems an odd way of studying the books, D. B. It listens like they are calling something. But maybe they are only practising a 'charm' for the mites. Why, here they come!" And D. B. went to meet the twins who were running towards us. They seized his coat, whispered excitedly, then all three ran back to the house.

I stood scratching my head and swinging the sprayer. It did not appear to be any business of mine, as they had not asked me to join them. Then I heard Mrs. D. B. saying: "Oh! Mr. Week-End, we have lost the cat!"

Possibly I have not mentioned before that Mrs. D. B. has the most beautifullest eyes and perfectly lovely hair. At that moment I was as fully conscious of this as at any other time. But at the word "cat" I brandished the sprayer so agitatedly that my charming hostess retreated a couple of paces.

(To be continued.)

Jottings from Ashdown Forest

Active flight for bees apparently must be well nigh over. Another chance to recuperate stores, also a failure. The winds and cold of late seem to have made a failure of the last harvest for bees, i.e., the ivy. Having so many to attend to, and so wide apart, the cold winds have made the final examination and packing of hives a tedious job. I have found one hive only after taking off section rack with a good bit in, well stored by leaving on the rack of shallows. It will be good till March or April, though found so I gave them a heap of Tate's loaf sugar.

Some owners have more or less well attended to syrup feeding, some stocks have it well sealed, others generally very little sealing done. Generally, autumn feeding restarts the production of brood, but this autumn the new brood is very moderate. Many stocks, and swarms, were found to have been dead for some time, the clearing out often being a job of unsavoury nature, such masses of bees dead and decomposing. Some naturally thought it was through neglect on my part, but I explained to them that bees dying of starvation by early October it would be a very poor chance of their being able to survive the winter by artificial feeding. Likewise for a long time there had been impossible days for bees or myself doing anything, with the hope the next day summer weather would come, enabling both the bees and myself doing something of importance. Those hopes have not materialised, very few owners could have been hoped to follow my advice to buy sugar, make it into syrup, and feed the bees from mid-August to the extent time has proved to have been necessary, had I called and given that advice; moreover, the spring attendances to do the necessary feeding, hoping for the best, are thought to make the keeping of bees very costly, though my scale of attendance charges has remained the same ever since 1908, with very few exceptions. I can only hope to pull through many (including my own 50, reduced by a few succumbed, and uniting, to 24) by uniting, storing combs, and Tate's loaf sugar, as mentioned in my previous Jottings. I think we will enjoy the abatement of Isle-of-Wight disease for some time at least, unless we get it in another form, through unsealed stores collecting moisture from the air within the hive, becoming thin and fermenting (as mentioned in query and reply 9945, p. 525). I wonder what most of my clients would think if I had called for 6 or 7 weeks daily and put 1½ pints syrup on each hive, they *would* tell me it was cheaper to buy honey than keep their own bees.

Re the same query (9945) I should hardly advise extracting the unsealed store. Rather wait for a fine warm day, then maybe some would be found well sealed, remove the sealed ones and store them (as Rev. Hemming mentions, he likes to store his empty combs (p. 519)), the bees would then be more crowded on the unsealed store. A pile (1 to 2 lb.) of *dry loaf* sugar over the feed-hole, well wrapped up, the brood box contracted by dummy, or the outsides filled in with frames with or without empty combs, a look occasionally, and more *dry* sugar if nearly or quite all gone, they should be right till early in new year. The hive opened on a warm day, empty outside combs removed, and the sealed ones put in close to, with very little disturbance to the cluster.

Re storing spare combs. Rev. Hemming asks (p. 519) how I prevent my combs getting mouldy. I don't do anything other than put a bit of perforated zinc or wire over the entrance, also see the top ventilators are open, and the roof not likely to leak. The outside empty combs he mentions generally become mouldy from condensation in the hive, as the cluster contracts. If let alone the expansion of the cluster causes the mouldiness to disappear, but it is bad policy for the manipulator to put such in the middle of a cluster before they have become clean.

Two recent experiences may be of interest, illustrating the above. One of my clients, a titled lady, used to take charge of the supers for storing; she packed each in newspaper and put in her store-room till I needed them. She had a long illness, and last spring died. In 1921 she was ill and the season excessively dry. I didn't really need all of them, so didn't trouble for them. In 1922 she was

dead; nobody seemed to know anything about them; the season proving such I didn't really need them. About end of August the housekeeper found them and bundled them out; they were swarming the place with moths. New racks and nice new combs, a hopeless mass of moths and cocoons. I could not clean them, so burnt the lot.

Another lady client with nine nearly new hives, taking a great interest in the bees herself, accepted my advice to reduce to seven. I intended doing the storing and piling business with the two spare hives, and at her request I carried the whole lot a distance of 100 yards or more and piled them in her bee-shed, which is often infested with mice, etc. They will now be in the warm to carry on their depredations, and quite likely somebody will need to shift them. Moreover in spring they will all need *carrying* back again. Yes, I prefer the outdoor method.

Re labelling honey. I think United Kingdom bee people are a bit misleading if they don't specify some part of the United Kingdom. *British is hardly good enough.* I, so far, cannot remember tasting any imported honey that could be described as other than shop honey, neither have I ever tasted any that would make it worth while for me to go overseas where I *could* produce honey and only change the address on my extremely simple label. I would get no repeat orders.

A. J. RIDLEY,

Horney Common, Uckfield, Sussex,
October 27, 1922.

Mid Wales Notes.

The season in these parts so far as honey is concerned is a total failure. The bees wintered well, and were in good form during April and May, and put some honey in brood-box and supers, but the bad weather of the next four months and the great increase in the population of the hives soon consumed this honey, and recourse had to be had to syrup feeding; but during the process of feeding I had two hives robbed out. I used bottle feeders, with the mouth of the bottle covered with bladder, in which were a few small holes burnt with a fine knitting-needle. Anyhow, they were worse than useless, as some of the syrup got trickling down on the floorboard, with the result that the whole apiary was demoralised, and I had a very bad time of it.

I have since made a few small-size Canadian feeders that hold about half a pint of syrup, and these work perfectly, and the robbing has ceased.

I have adopted the suggestion of Mr. Kettle of covering the brood boxes with three-ply boards with thin pieces of wood laid or nailed round to give a beeway. In the centre a hole 2 in. square is cut. On this feeders or candy can be given without disturbing the bees. The candy I put in a small wooden box or section 5 in. square, and I run five or six wires through fine holes about $\frac{3}{8}$ in. from bottom. A piece of glass is put on the top. The bees are thus able to come up and get all round the candy. By the way, why is candy so high in price? The best loaf sugar is 7d. a lb., and candy is quite 1s. a lb., and a pound of sugar will make a pound of candy. Fivepence on sevenpence is good profit. The cost of manufacture and handling cannot be very much, say $1\frac{1}{2}$d. per lb. on large quantities.

The prospect for the winter in many apiaries in this part is bad indeed, bees being kept in any old box, and no attention given to feeding in the autumn. Many stocks will go under. I know of one farmer who has already lost five lots out of the six he had, and he is only one of many. I think it is worse than cruel. No one should be allowed to keep bees, more than a horse or cow, without adequate food.—STREVLYN.

Wiltshire Bee-Keepers' Association.

A meeting of the Association was held at the County Offices, Trowbridge, on October 14. The Horticultural Sub-Committee of the C.C., working in conjunction with the Association for the arrangements.

The interest taken in bee-keeping was evidenced by the large attendance, nearly 100 being present from various parts of the county.

Lord Methuen presided, and among others present were Admiral Sir Chas. Briggs, Mr. Hanky, Lady Hobhouse, and Mr. J. W. Spencer (Atworth.)

The chairman, introducing the lecturer, Mr. W. Herrod-Hempsall, said he should be extremely grateful if he could give them some hints as to dealing with disease, swarming, etc., in addition to his lecture on "Wintering of Bees."

The lecturer remarked that the wintering of bees should not be left too long. They should look months ahead, and the moment the honey harvest was secured they should consider the question of wintering. After dealing in detail with the methods of removing the honey, which he said should be done at once and not in driblets, he urged the necessity of absolute cleanliness, remarking on the point that the majority of bee-keepers did the cleaning of the hives, etc., in the spring; that was wrong, the "spring cleaning" should be done in the autumn. Mr. Herrod-Hempsall explained the reasons for this and proceeded to dwell at some length on the importance of the hives being free from draughts, urging that bee-keepers should be as careful in this matter with their bee-hives as with their own houses. Another point dealt with was feeding, bees should not be allowed to starve or the opposite done, overfed, both would kill the colony.

Feeding for winter should be done with a view of stimulating the queen to try to secure young bees and to store food in the outer combs.

An important item in wintering, usually overlooked, was the use of the division board. This should be used to contract the size of

the chamber to what the bees could cover, then wrap up with porous material.

In conclusion, the lecturer answered the questions raised by Lord Methuen, and also referred to the efforts of the Ministry of Agriculture to improve the quality of bees.

A general discussion followed the lecture, a number of enthusiastic bee-keepers taking part. The hon. secretary, Mr. F. W. Miles, urged the need of all local bee-keepers' societies throughout the county becoming affiliated with the County Association, so that a series of lectures and demonstrations might be arranged in various localities.

Mr. J. W. Spencer observed that it was hoped to get up an outdoor demonstration, but that it was not convenient, and they had to be content with the meeting under the atmosphere of the County Council. He thought it would be a great advantage to get lectures and demonstrations by experts in different parts of the county.

On the motion of the chairman, a hearty vote of thanks was accorded to the lecturer, and a similar compliment to Lord Methuen for presiding.

(Communicated.)

Great Dairy Show at Kilmarnock.

The sixty-eighth annual dairy produce show of the Ayrshire Agricultural Association was held in the Agricultural Hall and adjoining halls, Kilmarnock, on October 19 and 20. Fortunately the weather was fine, and although the lateness of the harvest militated against the show as regards the attendance of farmers the turnout on both days was exceedingly satisfactory.

The entries in the various classes constituted a record in the history of the show, the grand total being 1,225, as against 1,168 last year. There were increases in the entries in all the principal classes. In consequence of the backward season the entries in several classes, including honey, showed a slight decrease. The entries for honey were 109, as against 120 last year. Mr. John Dickson, Burns Monument, Alloway, Ayr, judged the honey and wax and made the following awards:—

Light Run or Extracted Honey (17 entries).—1, Miss P. E. M'Kenzie, Summerfield, Dumfries; 2, G. Thomas, Exning, Suffolk; 3, J. E. Swaffield, Cheltenham, Gloucester; v.h.c., Robert M'Call Wilson, Kirkmahoe, Dumfries; h.c., W. J. Goodrich, 2, Oxford Street, Gloucester.

Dark or Medium Coloured Honey (15 entries).—1, J. G. Hamilton, Oxford Place, Garelochhead; 2, P. G. North, Cambridge; 3, Charles H. H. Adams, Newmarket, Cambs.; v.h.c., D. & J. Lindsay, Arnside, Westmorland; h.c., James Cochran, 18, Dundonald Road, Kilmarnock.

Sections of Comb Honey (8 entries).—1, George Evans, Newport, Salop; 2, W. M. Robson, Wooler, Northumberland; 3, Richard Grierson, Ruthwell, Dumfriesshire; v.h.c., Mrs. Findlay-Hamilton, Carnell.

Granulated Honey (13 entries).—1, Robert Steven, 25, Irvine Road, Kilmaurs; 2, George Evans; 3, J. E. Swaffield; v.h.c., William Boyd, Newlands Gardens, Dumfries; h.c., James Cochran.

Cake of Bees' Wax (14 entries).—1, J. Thomas; 2, D. & J. Lindsay; 3, Miss Nancy Roberts, Dolwyddelen, N.W.; v.h.c., Richard Grierson; h.c., John Rowlands, Pwllheli, N.W.

Light-coloured Honey, confined to Ayrshire bee-keepers (7 entries).—1, James Cochran; 2, Robert Brown, Tannock Street, Kilmarnock; 3, Matthew Kerr, Springside; v.h.c., William Richmond, Galston; h.c., Adam Thorburn, Cumnock.

Sections of Comb Honey, confined to Ayrshire beekeepers (3 entries).—1, John Henderson, Springfield, Cumnock; 2, A. White, Old Cumnock; 3, Mrs. Findlay-Hamilton.

Heather Honey (9 entries).—1, Major D. Yuille, Burns Avenue, Kilmarnock; 2, Donald MacDonald, Millhouse, Argyll; 3, William Boyd; v.h.c., J. G. Hamilton; h.c., T. Gordon & Sons, Stirling.

Mixed Heather Honey (5 entries).—1, William Boyd; 2, Robert M'Call Wilson; 3, T. Gordon & Sons.

Extracted Honey, confined to members of Kilmarnock and District Beekeepers' Association (4 entries).—1, Major D. Yuille; 2, James Cochran; 3, William Richmond; v.h.c., Robert Brown.

Comb Honey, confined to members of Kilmarnock and District Beekeepers' Association (1 entry).—Mrs. Findlay-Hamilton.

Extracted Honey, exhibit to become the property of the Association (9 entries).—1, Miss P. E. M'Kenzie; 2, J. G. Hamilton; 3, D. & J. Lindsay.

Comb Honey, exhibit to become the property of the Association (6 entries).—1, George Evans; 2, W. M. Robson; 3, Mrs. Findlay-Hamilton.

CORRESPONDENCE.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real name and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

Isle of Wight or Acarine Disease.

[10706] My letter in "B.B.J." of September 28 has evidently brought new hope and courage to many bee-keepers, and to me many letters of inquiry. I hope and believe that collosol sulphur kills *Tarsonemus* or *Acarapis woodi*, and spares the bee. I would add, what I omitted in my last letter, that I tried oil of peppermint (Mitcham), and that two or three drops in a queen-cage, which soon asphyxiated the bees, left the mites still living in the trachea. It may be that bees can shut the first pair of spiracles more completely than the others, and that much smaller doses, long continued, might do more harm to the mites and less to the bees.

My experiments go to show that if colossol sulphur and thick sugar syrup are fed to bees, the sulphur gets into the blood stream of the bee and poisons and kills the mites.

This is but the beginning of the investigation. The doses I used may cause spring "dysentery," and the weakening or even death of the stock. Many experiments are needed to determine the best dosage.

Collosal Sulphur is expensive, and I have corresponded with the Crookes Laboratories as to this. They inform me that bee-keepers may now obtain, and, I presume, through any druggist, a 5 per cent. Collosol Sulphur in 4oz. bottles, at 2s. per bottle, a much more favourable price. I have called this (b) below, while (a) stands for the old 1 per cent. solution.

I am also informed by Messrs. Burt, Boulton & Haywood, Ltd., Salisbury House, London Wall, E.C.2, that they sell a 50 per

cent. Colloidal Sulphur, and can supply it at 2s. per lb. for 1 cwt. lots, 2s. 6d. per lb. for smaller quantities, and 3s. 6d. per lb. in single pounds, packages and carriage free. This is a paste, and as it should act as well as the former, is very cheap. It is called (c) below.

Again, I would also desire that smaller experiments should be made with Precipitated Sulphur, called also Milk of Sulphur. This is a fine impalpable powder, costing about 2s. per lb., and would be cheapest of all, if it is as efficacious. It is called (d).

The maximum given in my letter was too large. I would suggest that in districts still infected with Acarine disease, but where the mite is still unsuspected, the following doses should be tried :—

(a) 1oz. of 1 per cent. Collosol Sulphur to 4 pints of thick syrup.

(b) 1oz. of 5 per cent. Collosol Sulphur (new) to 20 pints of thick syrup.

(c) 1-10th oz. of 50 per cent. Colloidal Sulphur to 20 pints of thick syrup.

(d) 1 grain of Precipitated Sulphur to each pint of thick syrup.

To guard against the mite, where it is feared, and where most of the winter supply is to be given, half of these quantities would suffice.

Where disease is suspected, it would be well to use stronger doses, as also when the hive is already well supplied with winter stores.

Say, of (a) 5oz. to 4 pints; (b) 1oz. to 4 pints; (c) 1-10th oz. to 4 pints; (d) 25 grains to 4 pints. For cases of established disease, more sulphur should be given, say, of (a) 10 to 15oz. for 4 pints; (b) 2 to 3oz. for 4 pints; (c) 1-5th to 1-3rd oz. for 4 pints; (d) 50 to 80 grains for 4 pints.

The syrup should be thick now, weighing about 1lb. 9 or 10oz. per pint; and, of course, it is better to feed it warm, if possible. In spite of the lateness of the season, I hope many will make experiments along this hopeful line.

JOHN W. MOIR,
Hon. Librarian, Scottish Bee keepers' Association.

October 5, 1922.

The Snelgrove Method of Queen Introduction.

[10707] I just wish to say a few words on my experience of this method of queen introduction. After seeing the article by Mr. Snelgrove, September 21, "B.B.J." page 465, I determined to try it first opportunity. Having a fine young queen in a small nucleus, and desiring to introduce her to a stock just returned from heather on October 9, I removed the stock queen and, at the same time, took the nucleus queen after the prescribed "drooking," and introduced her to her new home, and likewise the stock queen, after the same manner, was given to the nucleus. Next day I examined the nucleus and found the old queen walking about as if she had been always there. On the 14th the stock was examined, and the queen found to be quite all right, and plenty of eggs. It seemed as if she had just commenced operations immediately on finding herself surrounded with the bigger force of bees. I do wish to thank Mr. S. for giving his method publicity; so simple and efficient, saving no end of trouble.

AYRSHIRE.

Acarine Disease.

[10708] In your issue of September 28, 1922, containing my letter No. 10,696 on the above, I notice one also on the same subject from my friend, Mr. J. W. Moir, recommending "Collosol" sulphur. Last year I tried this drug on several stocks, and found it not only brought on "dysentery," but was detrimental to brood as well, even when used in far less a proportion than "equal quantities with thick syrup." For the successful use of sulphur as a cure, I am of the opinion that external use is distinctly more efficacious than internal through food, and that the latter should only be used if used at all, with caution.

One essential point for recovery to be assured not mentioned by Mr. Moir is that the diseased stock must be headed by a prolific queen.

One cannot conclude without raising one's tribute to the indebtedness of the whole bee-keeping fraternity to the pioneer work done by those stalwarts, Messrs. Anderson, Dr. Rennie and his assistants, Mr. Wood, of Glassel, and others, in bringing us so far as the removal of this scourge is concerned, "a day's march nearer home."

GEO. H. PRITCHARD.

Firth View, Beauly, Inverness-shire.
October 9, 1922.

Hubam Clover.

[10709] I notice several of your correspondents ask the experience of those who have grown Hubam clover, and as I have in my garden 150 feet in three rows now in full flower and seed, I will at once say that the middle of May is much too late to sow. I sowed mine in March, some of it in a cold frame, and then filled out the spaces in the open where the seed was too sparingly sown with the plants from the frame. Now I have plants by measure 9ft. down to 4ft. high, but I do not find that the bees visit them much. In fact, to-day, though I saw a few bees on them, they were far more numerous on the Michaelmas Daisies. Anyone who would like to see the plants are welcome. I have five stocks of bees quite close.

ALFRED J. CLARKE.

Longwood House, Oxford.
October 2, 1922.

Bee Shows to Come.

November 15 and 16.—Honey Show of the Worcestershire B.K.A. Five Open Classes (two Gift Classes for single bottle, prize 20s. each).—Schedules from G. Richings, 100, Northwick Road, Worcester. **Entries close November 4.**

November 16, at Beverley, in connection with the Beverley and District Chrysanthemum Society's Show. Open Classes.—Schedules from T. T. Taylor, Hon. Sec., Beverley and District B.K.A., 137, Keldgate, Beverley.

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FOR SALE. British Bee Journal, 1909 to 1921, unbound. What offers? — ROUND, 38, Arngask Road, Catford, S.E.6. k.55

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ENGLISH HONEY in 1-lb. parchment containers, 16s. per dozen, carriage forward.—HARVEY, The Apiarist, Andover. k.51

FOR SALE, through bereavement, Bees (Italian and Dutch). Seen by appointment.—Write, 18, Chatsworth Avenue, Wembley. k.52

FOR SALE, one Stock of English Bees on 10 combs in W.B.C. Hive, with super, shallow frame, rack and lifts; two W.B.C. Hives with lifts, super and shallow frame racks; also quantity Sections in flat, Foundation, Ends, Bee Escape Board, Strainer, etc.; the lot for £7, carriage paid. —Particulars, DR. LLOYD, Stocksbridge, near Sheffield. k.57

HONEY, about 120 lbs.; sample with pleasure; cash with order; package free; carriage paid; £7 to clear.—LAMBERT, Bee-keeper, Troy, Horsforth, near Leeds. k.58

WANTED for the Continent, a Queen Breeder, methodical and capable of working to schedule time in producing queens in quantity; single person of either sex.—Apply, giving references, to Box 93, British Bee Journal, 23, Bedford Street, Strand, W.C.2. k.2

SELL.—Two small powerful Acetylene Brass Head Lamps, with separate generator, suitable light car or cycle car, £3 the set; carriage forward.—HERROD-HEMPSALL, Old Bedford Road, Luton, Beds. c.77

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1½d. per word.

THE SOUTH HAMPSHIRE APIARIES beg to announce they are now booking orders for next season, and would advise their customers to book early to ensure first delivery.—Catalogue on application to H. E. NEWTON, New Milton, Hants.

"THE CRUCIAL PROBLEM OF BRITISH BEE-KEEPING," by Dr. John Rennie, F.R.S.E., F.A.C.—A valuable service can be rendered by Bee-keeping Associations to their members by popularising this lucid and instructive brochure on Acarine Disease, which is now published at cost price. It should be in the hand of every bee-keeper in the country.—Obtainable from the "B.B.J." Office, or direct from the APIS CLUB, at 2½d. per copy, post free. k.54

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Manufactured from guaranteed pure White Cane Sugar.

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Special quotations for large quantities.

Feeders, Quilts and Winter Appliances of every description. Illustrated Catalogue post free on application.

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CANDY.—4 lbs., 4s. 6d.; 7, 7s. 3d.; 10, 10s., post free.—HENSLEY, Luton Apiary, Chatham. r.k.47

TO ALL SECRETARIES and BEE-KEEPERS.—Send to me for samples of Honey for autumn feeding.—F. GOODRICH, 10, Weston Park, Crouch End, London. h.106

BEES REARED ON ALF. RYALL'S LINES keep well. Buy his advice.

"WIGHT" AND "ACARINE" DISEASES.—Prevention and removal; invaluable advice; 5s. 6d. "An eye-opener."—ALF. RYALL, 8, Ospringe Road, N.W.5. r.c.87

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Special quotations for quantities.
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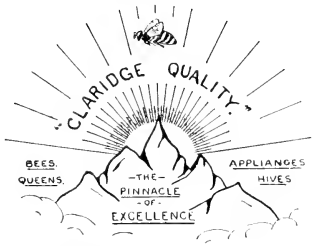

F. M. CLARIDGE, Copford Apiary, Colchester

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This thermometer has been specially designed for making candy for bee food. In place of the usual scale progressing by two degrees, there are only two marks on the scale. The top mark shows the temperature to which the candy should be boiled. The bottom one when it is cool enough to commence stirring.

These are both engraved *on the glass* and are *accurate*. There are no calculations to be made as on the ordinary sugar boiler's

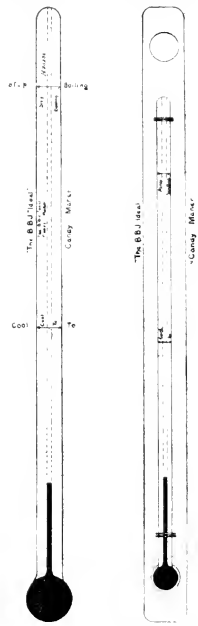

FIG. 1. FIG. 2.

thermometer with a full scale of degrees, which are not always accurate. A recipe for candy and full directions are sent out with each instrument. Any other candy recipe may be used. The thermometers can only be obtained from this office. As they are being sold at cost price it is not possible to supply appliance dealers.

Fig. 1, plain glass tube, price 4s.

Fig. 2.—Thermometer in brass case, 5s., packed in a neat cardboard case, postage 3d. We recommend the brass frames, as the tube being protected, it is not so likely to be broken. The frame is also plain, neat and easily cleaned.

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[Later] "I received the bees well packed and in good condition, only five dead bees in the lot. I can assure you I am well satisfied." Stairfoot, Barnsley, 1922.—C. W.

The only Pedigree strain bred by intense selection of both queen and drone breeding mothers for more than 30 years. Reduced Price List for 1923, free, of—

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Made from Pure Cane Sugar, and guaranteed free from Glucose. Prices:—

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SAVES TIME. SAVES LABOUR. SAVES MONEY.

Price only a little more than that of ordinary foundation.

Prevents sagging and gives a perfect comb.

Has been tested and proved for several years in hundreds of colonies.

Send for a sample pound and judge for yourself.

We are also making special frames to suit this foundation, but old frames, if in stock, can be adapted by the use of a special bottom bar.

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FAMOUS COTSWOLD CANDY is { AS SAFE AS HONEY. INCOMPARABLE IN QUALITY. EASY TO USE.

4 lbs. 5/- 10 lbs. 10/-
7 lbs. 7/6 20 lbs. 19/6
28 lbs. 27/-
Carriage Paid.

LIEUT. A. H. BOWEN, CORONATION ROAD, CHELTENHAM.

The Bee-Keepers' Calendar.

NOVEMBER, 1922.

9 Thursday. "There was milk, honey, music to make;
Up in their branches the little birds billed;
Chirrup, drone, bleat and buzz ringed the lake."
Meredith, "A Daughter of Hades."

10 Friday. "About the sweet bag of a bee
Two cupids fell at odds;
And whose the pretty prize shu'd be,
They vow'd to ask the Gods."
Herrick, "The Bag of the Bee."

11 Saturday. Order all bee appliances wanted for next year's work.

12 Sunday. "One rest is set for all, one time for toil;
At dawn they hasten out, none loiter then;
Again, when eve has warned them to depart
From meadow pasture, then is shelter sought."
Virgil, Georgics, Book IV.

13 Monday. "The flower-enamoured busy bee
The rosy banquet loves to sip."—*Burns, "Delia."*

14 Tuesday. "Around the colony, himself must wear
His hands with stubborn toil, himself must set
Shrubs that will bloom, and spread the genial rains."
Virgil, Georgics, Book IV.

15 Wednesday. "The sad-eyed justice, with his surly hum,
Delivering o'er to executors pale
The lazy yawning drone."
Shakespeare, "King Henry V."

Seasonable Hints.

Reports reaching us from all parts of the country show that, owing to the unseasonable weather of the past summer, there is a general deficiency of stores in the hives, and also that much of the food stored, both natural and artificial, is not sealed over, and so is not in the best condition. We are not advocates for wintering bees on candy, preferring to look on it as an "emergency" ration, which, generally speaking, the careful bee-keeper will have no need to use, but for choice we would prefer to winter on candy rather than trust to a lot of unsealed stores. There is no doubt that it will be necessary to use a large quantity of candy this winter to keep stocks going; even then we are afraid the death rate from starvation next spring will be heavy. Where there is a quantity of unsealed food in the combs we do not advise giving candy at present. If the weather keeps fairly open, much of this food will be consumed by the bees; therefore, when packing up for the winter, note should be taken of the quantity, and a rough calculation made, based on the strength of the colony, absence or presence of brood, etc., as to how long it will last, and provision made for giving candy later on without disturbing the bees; then a good store—4 to 6 lbs. —should be given at once, so there is no need to be constantly disturbing the bees

by giving a fresh supply. We prefer a box that will hold 4 lbs. or more of candy. If this has a glass bottom—which, of course, becomes the top when the candy is in position in the hive—it is easy to see when the supply needs renewing without the least disturbance of the bees.

Many bee-keepers make their own candy, and for this purpose it is better to have a reliable thermometer than for the novice in sugar boiling to trust to the old-fashioned method of testing when the boiling is finished by dropping a little of the sugar in water, or on to a cold plate. There are, however, several pitfalls for the amateur candy maker. Sometimes the candy is burnt, and will not "candy," but though it will "set," resembles butterscotch more than candy. In this condition the candy is not white, but a light brown, the depth of colour depending on the amount of burning. This must not be given to the bees; not only is it injurious to them, but it will gradually creep down the combs to the floor-board, and eventually out at the hive entrance. Another condition is the grain of the candy is too coarse, the crystals being often coarser than in ordinary lump sugar. The bees do not use these crystals, but throw them out of the hive.

When making candy, it must be borne in mind that there are two objects in view to thoroughly dissolve the sugar, and to boil the mass until all the water except a small definite proportion is evaporated, so that the result is a fine-grained candy that is not too hard. It therefore follows that the more water that is used in proportion to the sugar, the longer the mass will need boiling, but care must be taken that it is not burnt. The first care, before the mixture is boiled rapidly, is to see that the sugar is thoroughly dissolved, and this is likely to be accomplished more thoroughly with a large proportion of water, and the candy will have a grain as smooth as butter. The whole of such a sample of candy will be consumed by the bees. The disadvantage is that it needs long boiling, with more risk of burning.

When using one of our "B.B.J. Ideal" thermometers it will answer with any recipe for candy, as well as the one given with the instructions, but if less water is used, great care must be used in making certain that the sugar is first dissolved, and the mixture then boiled *until the temperature forces the mercury to the top mark on the tube.* Do not leave the thermometer standing in the vessel during the boiling process, as the bulb will be near the bottom of the pan, where the temperature is likely to be the highest. When taking the temperature, the bulb should be immersed for about an inch under the surface.

A Dorset Yarn.

"Profit and pleasure mingled thus with art,
To soothe the fancy and improve the heart."

As one grows older one is often told that "some are born under a lucky star," others will tell you "there is no such thing as luck." My opinion is that "pertinacity of purpose" is the secret of success. This is wholly true with bees. One lady told me at the last meeting of the Royal Horticultural Society that she had been cleaned out four times, but has now the finest lot she has ever had. Some people are so impatient, and will sell out of the business as soon as poor results come, but, with "pertinacity of purpose" never knowing defeat, the bee-keeper, as in everything else, will win through. Many write to say that this year they have had no honey since June. One correspondent told me she had already fed 56 lb. of sugar to her three stocks, yet in Dorset few days pass but cars come for honey. The most we have exhibited was at Bournemouth, over 3 cwt. without the weight of bottles. Nearly as much went to Weymouth. After each exhibit still more people come.

We have had set-backs with our bees; ten came through out of 60 one season. Another year nearly half died through robbing. Still we continued to "carry on" and came out with a profit. "How is it done?" the visitors ask. The answer is always the same. Have your stocks strong at the honey flow. All books tell the same story; it is the truest story ever written. The lady who has given 56 lb. of sugar to her three stocks has built up population and added stores to carry on for a successful start in May. "Profit and pleasure mingled thus with art." Knowledge comes best by observation. Books will teach you to be observant; when the proper time for increase comes and the surplus racks should go on top. Books will teach you the signs to observe. Observation will give pleasure, and profit will give you a greater pleasure. With bees there is none of the laborious tasks that we have in horticulture. We fruit growers, when planting up fields of berries on land which for generations has only been ploughed four to six inches deep, have to drive a digging fork through the hard callus of soil where the ploughshare has gone over so many years, and find it very much like hard work, but we can see ahead the long lines of shining berries, the hundreds of chips of fruit all going off to the markets; then pleasure and profit is combined. The way to obtain these results is the deep digging of the subsoil; that is why we put our backs into the business of preparation. If pleasure and profit are to be acquired with bees, the preparation is only with knowledge of the craft. What there is to be known of bees must be gathered first with guide books; then the power of observation will be greater. I have noted this fact in every walk in life. Near me is one who has carried on with poultry. Sixteen years ago he borrowed £10 to buy a few hen coops to start with. Pre-

viously he drew 15s. per week on a nobleman's estate; in ten years he asked the estate agent for more land to extend his holding. On this estate there is a rule that the applicant for land must show the agent that he has means to work it. The agent told me that he showed him his pass book of four figures. Now in sixteen years he has many acres of land, with birds in thousands, long houses for their well-being, a motor lorry to run his eggs to Bournemouth. Here was pertinacity of purpose, pleasure in his work, and profit on the whole. He showed me six Leghorn cockerels for which he had paid £50 the previous day for mating with his best layers. During all this time his wife has suffered ill-health. He has had her bed in front of a window that looks over his holding, and she can see him and the thousands of fowls always. Bees are not in the running with fowls, as they are not so sure of coming through each winter, but then the cost of food is a great difference. The one has to be wholly fed and the other rarely. I give this as an illustration of what can be done for pleasure and profit in rural England. My neighbour has only purchased his Ford car a year and a half, but he made £40 more on his eggs the first week by taking them direct to the Bournemouth hotels and hydros than he had in the local market. He lives in what was once a keeper's house in a sheltered valley with a small stream running through the centre. His only enemies are rats and foxes, but observation of their habits have made them easy to destroy. Some of us have watched his steady advance. Each year miles of new wire netting and poles to carry it has showed his pertinacity of purpose.

A railway signalman in this village has no room to keep a great number of hives, but he always sells a lot of swarms, and thus adds materially to his income; he has bought his own house. He, again, has pleasure and profit in his bees. His apples are some of the finest I have ever seen.

Another lady in Dorset made £58 with her bees this last season. Of course, I did not ask if this was clear profit, but it is the amount her father told me.

We are carrying on; we get pleasure out of our bees; we know that others are doing the same. Some of our experts are teaching boys (who have passed the preliminary examinations) to know more of the craft and the pleasure and profit that is to be had from it.

J. J. KETTLE.

Jottings from Huntingdonshire

November may be the month of gloom, of fogs, of muddy lanes and damp pastures; it is also something else—the month of fading glories. The golden autumn leafage of the beeches never looks more beauteous than in the early days of November. The purple leaves of the buckthorn are lovelier now than ever, and did ever one see more varied tints than are revealed on the rambling brambles? It is now mid-autumn, and ere winter comes our trees and hedges will have dropped their sails before the gathering winter storms. Our gardens have still their share of flowers. The January sown holyhocks being the first favourites when the bees come forth to seek pollen, but the Chinese broom is foremost in its freshness of bloom, dwarfing the yellow jasmine, which is all a-blow with florets of yellow. What a wonderful plant Chinese broom is! Shooting forth its flowers at Whitsuntide, it continues blooming right up to Christmas, lends a gaiety to the garden, and is always fresh.

Chrysanthemums, too, are very pleasing to sight and smell, but to our hive friends they have little to offer.

I am already becoming apprehensive lest the coming winter should be bad for the bees. One so often notices that when ice appears in late October and early November, the winter as a whole is warm and muggy. We all know what this means where our bees are concerned—decimation, unless the queens continue laying. If their majesties deposit eggs, grubs are hatched, and these want food necessitating a great demand upon the stores. One cannot keep bees within their homes when there is an outside temperature of 52 degrees Fah.; and while the lives of these insects is not more than seven weeks in summer, they will live through as many months between the vernal and autumnal equinox. This, however, depends on the weather. A winter of dry cold and plenty of frost is much better for *Apis mellifica* than a season of humid warmth.

One is struck by the absence of field fares. An occasional couple will come and help themselves to the privet berries. Usually at this time of the year they can be seen in flocks. The Scandanavian starlings also, where are they? Where in other years have been thousands, to-day are companies of fifty or so. Perhaps our Swedish and Norwegian readers can enlighten us. As for Norway, I should say that the apiculturists of that country have had the time of their lives this year. Our papers told us of heat waves in Norway when England was a land of shivers. Harvest months there were sunny and hot, in England showery and cool. I am sure our editors will not mind my inviting Norwegian readers to write and tell us their opinion of the 1922 honey harvest, and perhaps they will enlighten us as to the effect aboriculture has upon the honey flow in those climes. Taking the British Isles as a whole, I should be inclined to write down 1922 as the worst honey year since the adoption of bar-frame hives. The year 1920 was spoken of as the worst since 1888, and since 1920 was a much better honey year than the year we are passing through we'll conclude 1922 has no parallel. Perhaps the veterans of the craft will be able to recall years which have been almost as trying. However, "hope springs eternal." Our Friend Kettle has a wonderful way of keeping our spirits up, and most of us remember his delightful yarn on hope in the realms of beedom, which appeared a month or so ago. Beeitis is a wondrous thing. Said a woman to me the other day: "I've lost all my bees this year through lack of food, but I mean

to start again next year, and hope for better luck." When I asked why she hadn't fed her bees, she replied that, although she noticed the absence of stores in August, she hoped that the bees would yet be able to gather sufficient nectar to carry them through to the spring. This is hope in the wrong place. We must first do all that lies in our power, and then hope. Autumn is here, winter is coming; have we fed? Have we candy? Have we packed our bees down snugly? Then let us be of good cheer.

E. F. HEMMING, Steeple Gidding.

Week-End Bee-Keeping.

By S. H. SMITH, Cambridge.

(*Continued from page* 534.)

"Dear me! Mr. Week-End, I am beginning to grasp the inter-relations between bees and mites, but why should the word 'cat' conjure up a 'Cave-man?'

I dropped the sprayer and threw up both my hands.

"Don't be silly, Mr. Week-End. We may have kept out little secret too well, but all along you have most obstinately refused to seek any information. Well, the cat is out of the bag now, and I came to ask you to help us look for the missing kitten."

We were already heading for the house. No comment seemed necessary. So I answered meekly:

"Yes'm."

I sensed that Mrs. D. B. was watching me like a cat watches a mouse.

"The lost kitten is one of the two that came with your Satan. We gave away the other. Mr. D. B. and I recognised the value of the one we have kept as soon as we saw it at your apiary. That is why we bought the family. It is a perfect specimen of a tortoiseshell cat. And what is most important is that it is a tortoiseshell Tom. Now, does that fact convey any information to your extremely practical intelligence?"

"Yes'm."

"Don't say that again, Mr. Week-End! What do you know about cats?"

"To tell the truth, dear madam, I am not much interested in cats. They can chase their tails without any interference from me, whatever colour or sex they may be. Satan is the only one on my visiting list, and please remember I did not adopt her, she adopted me."

"Talk about entertaining angels unawares! Well, we've sold 'Pious,' and the purchaser was coming for him on Monday next. We've kept a strict guard over him, but now he is lost."

"Why 'Pious'?"

"We named him after you, Mr. Week-End. You know you have a way of saying pious this and pious that. It amused the children, and they named the kitten accordingly."

We had reached the house, and I opened the door and we went in. The rest of the members of the family were turning the furniture upside down. Freda, emerging from the coal cellar, her cap askew and a smudge at the end of her nose, glared at me as if I were responsible for the trouble. I asked a few questions and then went outside. Choosing a soft spot on the steps, I sat down and lit a cigarette.

Knowing something of Satan's ways, I endeavoured to work out just what "Pious" might be expected to do on a fine sunny afternoon, after a heavy meal, after being shut up for several days.

Satan had the habit of climbing a tree, stretching out on a smooth limb, snoozing and sunning herself. This trait might be inheritable. So I got up and peered into the trees. There were many fine, large specimens in that garden, but I had only inspected half a dozen when I came across a fine strawberry tree with thick, smooth branches. Stretched out at full length on a limb about eight feet up was a half-grown tortoiseshell cat.

It was too high up to reach without the aid of a chair, and I saw none handy. Besides, tortoiseshell cats are not so uncommon and it might not be "Pious." Like in "cures" so in "finds," it behoves one to be careful. A simple test seemed indicated. If it were a strange cat it would go over the garden wall; if it belonged to the house, it would make for that refuge.

Stepping softly, I got under the tree, then let out a "View Halloo!" and a "Yoicks Tallyho!" and a "Gone Away!" that made the welkin ring and the windows rattle a chorus. The tortoiseshell cat, every hair on end, went up in the air, turned a double somersault, but landed on its feet and streaked for the house. Doors and windows were opening as it reached it, and it bolted inside. Sounds of jubilation arose, but I went back to the bees.

D. B. joined me a few minutes later, and we kept strictly to bee talk. No. 2 was duly sprayed, a pad was placed on the floorboard, and an extra comb given. A division board closed things up snugly. Then I piled six cakes of candy over the frames, covered them with quilts, and put on the roof.

"Why the big ration, old man?"

"Of all the foolishness in feeding bees, this giving of driblets gives me the worst pain. If you are going to feed bees at all, feed generously. A 10-frame starving stock should have a 28lb. tin of warm thick syrup or 20lb. of good bee candy, given it all at one time. Better place bodily a 10-frame starving stock directly over a pan holding 20 or more pounds of warm syrup than to feed via the one pound bottle method. You would have to throw hay or cork chips on the surface, of course, to prevent the bees from drowning, but they would take up the syrup in less than twelve hours."

"Take candy. I prefer a regular roof of it to the placing and re-placing of one cake at a time in some glass-capped contraption. Give at least 6 lbs. at a time, better yet give 20 lbs. if needed, cover up warmly, and let the bees be. They will be there in the spring. All this fiddling and fussing with little doles to bees is amateur twittering."

"No. 3. Not many bees are left in the sections, D. B., and the little beggars have apparently helped themselves liberally before they went down. Please puff a little smoke when I heave off the two racks. Now, off with the wire clearer board, and we will take a look below and give all combs a spraying. Four combs have good patches of brood and there is pollen and some honey in the others. Quite a few bees, too. How many pounds of honey do you make it, D. B.? About 10 lbs. counting the forty-two sections to have still 25 lbs. there is more than enough. Yes, I've changed my mind about giving those sections to No. 1. The season is such that the bees would only empty them. We'll put on an excluder instead of the clearer board, and the bees can go up and help themselves."

"Treat your bees generously, D. B., and in time you will get your reward. And did not this now divided stock pay us £3 15s. in the spring, just like No. 1? Cast your honey upon your bees and it will return in the form of hard cash and a good surplus in nine years out of ten."

"We will run the queen in by the smoke method, as I am going to use a vapour cartridge on these bees. But we will first let them gorge themselves with the section honey, and they will accept her all the more readily. What about a smoke for ourselves?"

D. B. handed me a good-looking cigar, lit another for himself, and waved me to the bench.

"It's queer, old son, how this cat-motif has punctuated your bee doings all along. First you advertise some cat riddles, then Satan adopts you, then you annex us. We acquire the cats, and then 'Pious' administers your reward. The wife has told you, I believe, that we have sold the kitten. Guess what your share amounts to."

"Two cigars, old man, and well worth it. I always liked this brand. But have done with the cat-jabber: it is getting to be a cat-complex. Do you know that next Saturday will be our sixteenth time of meeting? Be prepared to talk business. It was buy or sell, you know, and we may as well face the reckoning."

"Blow the reckoning! Mrs. D. B. confided to me a short time ago that she thinks you have a streak of 'Cave-man' in you. You certainly have some aggravating moods, Week-End. Look at the row you let loose a while ago. Now, for the second time of asking, how much do you think we received for that tortoiseshell Tom?"

"Twa pun?"

"Hark at him! Twa pun! You may be wise to bees, dear boy, but you know darned little about cats. Take a firm grip of the bench and I will tell you something. That tortoiseshell Tom was good for exactly eighty pounds."

"Eighty pounds! Eighty pounds of what?"

The bench fell over and the welkin rang again as we clinched and rolled upon the grass. *(To be continued.)*

Bee Notes from Derbyshire.

I think I have about put "paid" to bee work for 1922. I had one lot with a virgin queen, and a week ago I carried it across the garden and put it bodily on top of another hive with a news sheet between. I went yesterday afternoon just after a snow shower (aye! in October even), when the sun popped out again, to put them right; but they were clustered in the top of their comb, had not even found out there was paper between them, so I had to bide a wee till warmer days make them move again. I see in THE BRITISH BEE JOURNAL about bees not sealing stores over. I never saw more stores unsealed. I fed 5 stones of sugar to mine from the 4th to the 18th of October, and very little is sealed over. There could not have been a worse time than last winter, and I fed one hive 12 lbs. of sugar on October 16, and they came through a treat. I should never think of extracting unsealed stores. I used to find syrup going wrong when I boiled it, but since I have only boiled the water and not the sugar, I find no bad results from late feeding. They are more likely to go wrong for the want of it. The heather season, although not so bad as Yorkshire, was very short, and the honey pale and watery. I said early on it was shaping to be like 1912. It was a little better than that, and I was surprised bees did as well as they did, considering what bit of sun shone up there. There were seven days, from September 1 to 8, that were misty and dull, sun scarcely ever shone, but it was warm and still, and didn't they go those days! There was a perfect roar about the hives. Among the heather you could hardly set a foot down for fear of treading on them. One day it was so misty that I could scarcely see 100 yards, but they were coming and going through it like will o' the wisps, and as they went up with about a pound of stores for a hive and came back five weeks later with 10 or 12 lbs. in each brood nest, and about 28 lbs. in supers, mostly got by two hives, I think they worked well to say it was all got in those seven days. Three hives with sections only produced six saleable sections, or sealed ones. They seemed as if they could not seal anything.

I have been highly interested in D. Wilson on section production, and as he says the preparation for sale belongs to another chapter, I would here like to emphasise that before any sections are put up for sale or exhibition in any shop window, care should be taken to just whittle all travel-stain off the edges and out of the corners with a sharp pen-knife.

I am sorry to say I had to spend five days in Canterbury a few weeks ago, and in a shop window there, not 100 miles from the Westgate Tower, I saw some well-filled sections under a glass dome that would have looked a treat had the travel-stain been trimmed off. I also spent six days at Eythorne, where I went from Canterbury on a bike. There was great promise everywhere as I rode along of abundance of white clover crops for next year, but there were two

places in particular, one was Womenswold, and the other Tilmanstone; either place should be a bee man's paradise. At Tilmanstone I saw bees on September 23 working a patch of Sainfoin, some acres that looked like heather in bloom, and they said that was the third crop. There is white clover galore for next year, while, as I kept going on to Deal and Walmer, also around Ripple Court, there were great patches of mustard, yellow over. One man showed me bees filling sections with it, but I took them off for him, as I told him it would be better in brood combs then. There seems a fair lot of little bee-keepers with their two or three hives, but although one or two had got some fair samples of clover honey, it was very scarce. It seemed to have been more a year for mushrooms and fruit.

I see I wrote in my diary on June 25 : " I think the honey flow has finished for this year on June 12," and according to results I was not very far wrong. I remember so well the evening of June 22, 1912, when the honey flow stopped that year. Well, the evening of June 12 this year was just like it.

Revell Street, Claycross. TOM SLEIGHT.
October 29, 1922.

Jottings.

An experiment during the Royal Counties Show at Guildford might prove interesting regarding the behaviour of some two or three hundred queenless bees shown in a three-inch-deep glass super honeycomb design.

Food, of course, was plentiful, and a lady helper kindly gave sips of water through the outside edge of the glass, which the bees seemed very eager to reach. I had no idea of sending bees in the first instance, but thought I would like to test one or two eventualities over this rather long period of confinement—five days.

There were really very few deaths after the first two days' excitement of travelling, which was by bicycle, little or no sweating until the return journey, when they commenced to cluster in one corner of the super, otherwise they appeared fairly happy, I thought. One would have thought after such a long confinement they would have been only too anxious to fly and escape from such a close and lighted prison, but no. I had all the job in the world to get them out, and no doubt fear of their comrades was the real cause. I flicked out a few, and they appeared to be received all right, but it was not long before they were tumbled out of their own home, which was rather hard luck, as they had helped to gain a third prize by their visit to the " Royal " at Guildford. This is curious, as they obviously had collected no other scent, so they must have shown their apparently newly-acquired strangeness by forgetfulness of environment, on the one hand, or have set up an independent status of their own on the other. I settled the argument by opening up and flouring a good many at the top, using the same method of introduction to the " strangers," as I thought they deserved it.

Vagaries of Swarms and Seasons.—Everywhere one reads of decamping swarms this year. I have lost about six, I think, and the topsy-turvy season no doubt will be responsible for many losses this winter, as stocks which were prevented from the second swarm and stored a fairly large amount of honey, this year proves quite wrong, while those that were allowed or did throw the second with me have honey to spare. This shows how a month of queenlessness makes or mars the colony for the year. This year it has no doubt made them, as this honey was conserved at the right time, while those with the heavy continuous batches of brood and three or four supers ate more than they could gather from June onwards. Personally I think so much unsealed stores is because very little was in the combs until mid-September, but this is hard to explain where the bees had been fed, as temperature was hotter in October than has been an average for some time.

Shows, Labels and Competition.—I have been unwell and only just opened my exhibit returned from the Grocers' Show. We can't all get prizes or commendation, but I should like to thank the hon. secretary for adopting the suggestion of mine of the description and address card. This should make shows a real help to the producer, and shows that, although we know the secretaries get lots of grumbles and precious little help, they will add to their labours if suggestions promise usefulness and appreciation. It is sometimes difficult to draw the line between criticism and suggestion, but it doesn't matter much if the spirit is right.

Surely there is a need to get down to it if we are to hold our own. Bottles and other containers are down a good bit now, but we must cut harder if we are to get our honey first in the field. After about twenty-six years, I have had a complaint that my honey contained two or three unrecognisable flavours. The tradesman took the pot back and sold it elsewhere. This didn't satisfy me, but I was too late. This had my county guarantee and label number on. I suppose it was easier to take it back than to write to the secretary and get ignorance more securely and permanently disposed of.

But a smaller quantity of honey at a third higher price, if only in an earthenware pot, must be all right. The label says it is " Pure Honey."

I find a difficulty still in getting the stationmaster to accept a prepaid return fee for the return exhibit. This is rather disconcerting when one is on time to reach the show. He complains the labels are not right for this. Does anyone else have this trouble? I've had it three years. Can you tell me, Mr. Editor, please? A. H. HAMSHAR.

[There should be no difficulty in getting prepayment stamps for return of goods from show. We believe it depends to a great extent—if not wholly— on the officials at the railway station. It would be useful if other exhibitors would give their experiences.—ED.]

Notes from Gretna Green.

Safe Wintering.—This familiar problem is further complicated by there being no certainty that a sufficiency of sealed stores is any guarantee against wintering troubles. I have seen strong colonies, wintered with a shallow super of sealed stores left on, answer the spring roll-call as dysenteric weaklings. In the same apiary a decidedly weaker colony, with its meagre stores supplemented by two racks of partly-sealed heather sections, came out in spring stronger than when closed down, and outstripped all others when the days came for honey-gathering. The explanation for such seeming mysteries is relatively simple, and also applicable to many of the so-called problems that confront us in the apiary.

Better Methods.—Despite the competition of foreign and colonial honey, our home product will hold its own, provided we concentrate on the two essentials of lessened costs and increased production. The former is a matter of substituting home-made equipment for high-priced factory goods, and also of shunning the various fads and expensive appliances advocated by bee-keepers of the "scientific" type. I should like to see these theorists produce balance-sheets showing any profit at all from their bees.

Increased production, again, is a matter of levelling up the others to somewhere near the standard set by the "best" colonies found in all apiaries, and there is a fruitful field for investigation here.

Personally I favour dual-queen working, not in the unwieldy "Wells" hive, but in the ordinary W.B.C. type fitted with "Atkinson" vertically-divided brood chambers. A colony can be split in two after the honey-flow, both lots wintered under the one roof, and, with two queens at work, it is quite possible to have thirty standard combs of brood in one hive previous to the white clover flow.

For section-honey production, minus swarming, the combined working forces could be started anew on 10-frame foundation, and with a young queen just as the honey flow began.

The original hive, still with its two queens in their respective nurseries, being, of course, moved aside to produce another large force of gatherers for a later honey flow, such as heather.

Isle of Wight.—My notes on page 522 should read "and the soil of one's body *in* a suitable condition to cultivate that germ."

The misprint is obvious. Still it gives a very confused meaning to the sentence, and my contribution was not improved by the omission of a whole paragraph further down the column. The missing portion was to the effect that Isle of Wight is a result of queens being reared under unfavourable conditions, or mated to diseased colony drones, and that, conversely, immunity is a matter of having better-reared and correctly-mated queens.

Much confusion is caused by regarding all cases of this disease as necessarily alike. During an influenza epidemic there may be mild, severe, and fatal cases in one household, yet it is inconceivable that the attacking germs can differ in offensive power. In an Isle-of-Wight-affected apiary we often see some colonies throw off infection unaided, while others that seemed doomed to die recover rapidly when given clean hives and a comb of hatching brood. Yet others may be so severely infected that all known forms of treatment, requeening excepted, are alike utterly useless. Here, again, there is no reason to suppose that the attacking mites differ in offensive power, but rather that in bees, as with persons, variations in resisting power are accountable for the widely differing results. To sum up, it may be said that any conditions which either temporarily or permanently lower the vitality of a colony may be expected to result in approximately similar forms of Isle of Wight disease. And that the timely insertion of *virile*, rather than *merely prolific*, queens is in every case equally effective either as a remedy or preventive.

J. M. Ellis.

Echoes from Cornwall.

"What a miserable year!" This is the remark that greets you when you run up against a bee man of this county, and in that remark it sums up the season throughout the country. At the present moment, October 29, it is snowing fast, and all the hive roofs are covered and the entrances blocked with drift. Who would have thought it, here in Cornwall, snowing and blowing hard in October?

No signs of the bees, and a good job, too, otherwise hundreds would perish and our stocks be materially weakened before winter has started.

I am rather doubtful if we shall get 40 per cent. through this winter, as scores of stocks in this county have not been fed, and where they have, it is unsealed, so that if they don't die of hunger they probably will with dysentry later on. I don't suppose there has been anything approaching 100 sections produced in Cornwall if all the bee-keepers put their totals in one grand total for this year, and the extracted honey has been very little and of no definite source. Really very disappointing, more especially as disease has again taken a heavy toll. Personally, my apiary has produced about one-eighth of last year's total, and with treble the number of stocks. During a visit to a little western port last week my eyes caught sight of a fine display of honey in a shop window, together with charts, etc., describing the honey bee. Naturally, my curiosity was aroused, and I stopped.

There were several different sorts of honey, but what aroused me was the prices. Some clear and some granulated 1s. per lb. Other clears were 1s. 3d. and 2s. per lb.; some marked "English," and others nothing at all, whilst still others were placed on a

piece of heather, evidently to give the impression that it was heather honey. Looking still closer I began to have my doubts. However, I plucked up courage and went in as a non-apiarist. I asked for a 1s. (screw top) bottle of that red-looking honey, please. "Oh, yes!" I unscrewed the cap and smelt it. "H'm!" I said, "What's the difference in the yellow and this?" "Oh, this is *imported* honey and the yellow is English, and the English is 2s. per lb." "Thank you, I'll try this," paid my 1s. and walked out. Just as I thought. Foreign and English being sold to the public side by side and not marked "Foreign," although *some* of the English was so marked and others not. Fair enough if you asked, but grossly unfair otherwise.

I sampled this bottle I had bought, and it isn't in the class with our English honey anywhere. How people buy it I can't imagine; I suppose it's because it's cheap. But there, if it is sold in a similar manner to this, how are they to know English from foreign, if there are no labels of origin on the bottles, not even "*Imported*"?

It is most damaging to our craft. It was all the more amusing because there were leaflets from a certain well-known firm of English appliance manufacturers placed among the bottles describing the manipulations of bees, etc. Also placed on several of the bottles were large specimens of "Bumble Bees"! Oh, dear! What shall we see next? Well, now, those bee-keepers who haven't fed had better place their candy orders at once, or make it themselves, for surely our little friends are worth looking after in spite of the bad season. Who knows, perhaps next season may be a bumper, and then, alas! we shall wish we had spent a few shillings in candy and preserved our little charges.

A. D. BENNETT
(Local Adviser, Cornwall Bee-keepers' Association).

Degeneration of Bees.

The degeneration of bees, which is such an important factor in predisposition to disease, is caused by :—

1. Old worn out and inferior queens.
2. In breeding.
3. Faulty feeding.

The first two causes have been often written about, so I propose confining my attention to the third cause.

It is the custom of some bee-keepers to remove as surplus honey for profit nearly all the stores that have been collected by the hard-working little bees during the honey flow, and there is not sufficient nectar left for them to garner sufficient food to last the colony during the long winter. The bee-keeper therefore feeds his bees with syrup or candy, or with both.

Sugar ($C_{12}H_{22}O_{11}$), I maintain, is an insufficient diet; it contains no nitrogen, although this can doubtless be obtained by the bees from their store of pollen deposited in the brood-chamber; still, apparently something is lacking, and this we call Vitamine. What is Vitamine?

Professor Benjamin Harrow says: "We do not know. So far chemical analysis has failed to detect it; we have not been able to isolate it; we have not been able to see it under the highest power of the microscope, but science teaches us to know when it is present or absent, by its effects on the living organism."

Professor Hopkins' experiment proves this. He took eight rats marked A., and another eight marked B., all about the same age and weight, and fed the A. series with the isolated constituents similar to those that can be obtained from milk—protein, fat, carbohydrates and mineral salts. The fat used was lard, which is free from vitamines. The B. series were fed with the same constituents, to which was added 2 cubic centimetres of milk. Series A. lost weight and showed pathological symptoms. Series B. gained in weight rapidly. On the eighth day the diets were reversed, so that now A. series were getting the milk and B. series were deprived of it. Almost immediately A. series commenced to gain weight and B series to lose weight. The isolated foodstuffs yielded energy in quantity more than sufficient to satisfy all calorific requirements. The 2 c.c. of milk was so small in amount that it could not have added anything material to the energy value of the food, so the unknown substance called vitamines was responsible for the increased weight.

Vitamines have been classified as :—

Fat soluble A.
Water soluble B.
Water soluble C.

For a long time I and others have advocated the addition of onions or garlic to the syrup and candy when feeding bees, and I have always found the bees took it readily. Now I find onions contain only one class of vitamines, the water soluble C, whereas carrots and germinated pulses or cereals contain all three varieties.

I still maintain that good ripe honey is the best food for bees and rarely feed mine with sugar, but if I have occasion to do so in future, I propose adding to the syrup the pressed-out juices of carrots.

VITÆ.

Propolis Poisoning.

In reply to a query as to the ointment used for checking propolis poisoning (10685, p. 452, B.B.J., September 14), "C. C. Fehn" writes :—

"I am afraid that I have lost the prescription for the particular ointment which the doctor gave me, but he prescribed it on general grounds, and did not suspect that propolis was the cause of trouble. I can no doubt get him to repeat it if it is urgently wanted, but I am told by a chemist friend that one of the stimulative ointments of the Pharmacopœia which any chemist makes up or keeps by him would be suitable, and he advised me to try the ointment compounded

of mercury, zinc and lead, which is one commonly used.

"That is for a cure. The *American Bee Journal* recommends as a preventive the use of carbolised vaseline on the hands when dealing with combs. This is on the advice of the late Dr. Bonney, the well-known American bee-keeper. This, I find, is kept in stock by chemists here."

CORRESPONDENCE.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real name and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

Keeping Foundation.

[10710] Having been prevented from starting bee-keeping this autumn, I have a hive with frames, etc., fitted full sheets foundation. Will anyone be so kind as to advise me how to keep the foundation from becoming too brittle for the bees to use next spring? Is wax-moth likely to attack unused new foundation? The Rev. E. F. Hemming, of Steeple Gidding, speaks of spraying with Yadil syrup. I should be glad to know how this is prepared, and whether its use is advisable with new foundation.

NOVICE.

[Instead of replying to the above ourselves we will be pleased to have our readers' views. —EDS.]

Hardiness of Bees.

[10711] I think the following example of the hardiness of bees will prove of interest to bee-keepers.

In the summer of 1921 a small swarm took possession of an empty hive belonging to a bee-keeper friend's brother. A long time previously this hive had contained a stock of bees which had died out with acarine disease, and the empty hive had been left in the apex of a small plot of ground in a very cold and windy position, facing north-east. Many of the combs were missing; those left had been pushed in a heap to one side of the brood-box, and were eaten to shreds by wax moth.

When my friend heard of the swarm he went up and cut all the old comb away from the frames, and left the bees alone with two moth-eaten quilts on top.

After this the bees were not looked at till early this summer, 1922. My friend was greatly surprised to find them still there, thinking that they had perished long ago during the winter. He was further surprised to find that they had filled all the frames with new comb! They hadn't had even starters to work upon.

He put on a box of shallow combs, and never looked at the bees till this September, and then he found that the whole brood nest was nearly full of sealed honey, while the shallow comb super was also nearly filled!

Looking at the fact that it has been a very bad season here, I cannot understand the success and hardiness of these bees, who have had absolutely no attention.

As I have said before, they were placed in a cold position with their entrance facing north-east, from which direction we get very cold winds here in the winter, and with only moth-eaten quilts.

For my part, I think that bees are often "killed by kindness," and have read in the *B.B.J.* of other instances in which bees have done well in northerly positions.

E. L. JENKINS.

Beryl, Wells, Som.

Hubam Clover.

[10712] I am pleased to send a photo of my Hubam sweet clover grown at Windens Ambo, Essex.

The clover seems a very useful plant for the bees, blooming as it does from August onwards.

This was sown May 8, is now over five feet in height, and has been blooming profusely since August.

The bees are continually visiting the blossoms, the lateral branches also being thick with flowers. A neighbour's calves have quite readily eaten some stalks of the clover given them.—GLADYS M. DARRINGTON.

Notices to Correspondents.

"ELEL" (Essex). *Candy sample.* The candy is far too coarse in grain, and if given to the bees they will waste more than half of it. Add more water, and re-boil it. See Editorial.

J. E. (Surrey). *Using shallow combs of sealed honey for winter feeding.* We should prefer to give one comb at a time, laying it over feed hole with a bee space under it. Your plan of making a box to hold one frame of comb and giving the bees access to the whole of it is good. If you could cover the top with glass you would be able to see when another comb was needed.

W. W. R. (N. Wales). *Split cane for skep making.* We are sorry we have been unable to find out where this can be obtained. Can any reader supply the information?

Bee Shows to Come.

November 15 and 16.—Honey Show of the Worcestershire B.K.A. Five Open Classes (two Gift Classes for single bottle, prize 20s. each). Schedules from G. Richings, 100 Northwick Road, Worcester. **Entries close November 4.**

November 16, at Beverley, in connection with the Beverley and District Chrysanthemum Society's Show. Open Classes. Schedules from T. T. Taylor, Hon. Sec., Beverley and District B.K.A., 157, Keldgate, Beverley.

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One Penny per Word

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HEATHER HONEY.—For Sale, by an English bee-keeper, located in the heather district of France, his 1922 crop of Heather Honey, comprising over 2 tons of A1 quality, equal to the finest Scotch produce. It is packed in casks averaging 2½ cwts., and as the price is right it is well worth the attention of bottlers. Samples sent free and price to bona-fide buyers.—W. WILSON, Laurent par Lavardac, Lot-et-Garonne, France. r.k.62

GOOD GLAZIER'S DIAMOND, perfect, 8s. 9d.; six solid Silver Teaspoons, 19s. 6d.—HUBBARD, Northkilworth, Rugby. r.k.43

ENGLISH HONEY, in 28- or 56-lb. free tins, 1s. 3d. per lb.; sample 3d. — RONALD HARVEY, The Apiarist, Andover. r.k.15

WANTED, Light Car, Singer, Swift, or similar make, about 7 to 8 H.P. Wanted, 1 or 1½ H.P. Electric Motor, 1,000 revs., 110 volt.—W. HERROD-HEMPSALL, Old Bedford Road, Luton. k.42

BERKSHIRE HONEY, guaranteed pure, 1s. 6d. lb., in 7-, 14-, 28-lb. tins; tins and carriage free on 28 lbs.—DR. BELL, Lambourn, Berks. r.k.50

THE World's Famous Raspberry, Lloyd George, perpetual fruiting, 10s. dozen, 60s. and 70s. per 100.—J. J. KETTLE, The Violet Farm, Corfe Mullen, Wimborne, Dorset. h.78

ENGLISH HONEY in 1-lb. parchment containers, 16s. per dozen, carriage forward.—HARVEY, The Apiarist, Andover. k.51

SELL.—Two small powerful Acetylene Brass Head Lamps, with separate generator, suitable light car or cycle car, £3 the set; carriage forward.—HERROD-HEMPSALL, Old Bedford Road, Luton, Beds. c.77

TAYLOR'S SOFT WHITE CANDY.

Manufactured from guaranteed pure White Cane Sugar

1/- per lb., post extra,

or 4lb. parcel, **5/-** post free ; 7lb., **8/-** post free ; 10lb., **11/-** post free.

Special quotations for large quantities.

Feeders, Quilts and Winter Appliances of every description. Illustrated Catalogue post free on application.

E. H. TAYLOR, Ltd., Beehive Works, WELWYN, HERTS.

FINEST quality Buckinghamshire Honey from the Chiltern Hills, 56 lbs., 70s.; 28 lbs., 40s., carriage forward; tins free.—STEVENSON, Thames View, Flackwell Heath, High Wycombe, Bucks. r.k.60

ATTRACTIVE CHRISTMAS PRESENTS.—Delicious Devon Toffees, made with English Honey; assorted parcels, 2s. 6d., 5s.; highly recommended.—BOWEN, Coronation Road, Cheltenham. k.61

FOR SALE, fine Stocks of Bees in W.B.C. Hives, also Appliances. What offers?—COOLEY, Whitehill, Rickmansworth. k.59

PURE HAMPSHIRE HONEY, — 1 cwt., £7 7s. 6d., in 28-lb. new tins; tins and carriage free.—MYLAND, Winchester Road, Basingstoke. k.64

FOR SALE, Geared Extractor, 42s.; Ripener, 20s.; Prestantia Magic Lantern, 21s.; Lunar Lamp for same, 42s.; "Amateur Mechanic," 4 vols., 20s.—REV. NEWMAN, Kennardington Rectory, Ashford, Kent. k.66

WANTED for the Continent, a Queen Breeder, methodical and capable of working to schedule time in producing queens in quantity; single person of either sex.—Apply, giving references, to BOX 93, BRITISH BEE JOURNAL, 23, Bedford Street, Strand, W.C.2. k.2

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1½d. per word.

THE SOUTH HAMPSHIRE APIARIES beg to announce they are now booking orders for next season, and would advise their customers to book early to ensure first delivery.—Catalogue on application to H. E. NEWTON, New Milton, Hants.

CANDY.—4 lbs., 4s. 6d.; 7, 7s. 3d.; 10, 10s., post free.—HENSLEY, Luton Apiary, Chatham. r.k.47

TO ALL SECRETARIES and BEE-KEEPERS.—Send to me for samples of Honey for autumn feeding.—F. GOODRICH, 10, Weston Park, Crouch End, London. h.106

RYALL'S ADVICE ON WIGHT-ACARINE TROUBLES, 5s. 6d.—8, Ospringe Road, N.W.5. r.k.67

PURE CANE CANDY.—4 lbs., 4s. 6d.; 7 lbs., 7s. 3d.; 10 lbs., 10s.; post free.—STONE, Chelsea Road, Easton, Bristol. k.65

SUPERFINE CANDY.—None better. 7 lbs., 7s. 6d.; 10 lbs., 10s., post free.—TICKELL, Westbourne Apiary, Cheltenham. r.k.49

STRICTLY BUSINESS.—Flavine—S. Bee Candy, 4 lbs., 5s.; 6 lbs., 7s.; 10 lbs., 11s.; 20 lbs., 21s. Larger quantities by passenger or goods train at a reduction in price.—S. H. SMITH, 30, Maid's Causeway, Cambridge. r.k.63

PURE CLOVER HONEY in 7-lb. tins, an Ideal Xmas Gift.—PEARSON & GALE, Marlborough.

"Pollination of Fruit in Relation to Commercial Fruit Growing."

By C. H. HOOPER, F.R.H.S.

Now is the time to select the varieties of Fruit Trees you intend planting. An expenditure of 7d. now will be pounds into your pocket in the future. Get a copy of "POLLINATION OF FRUIT IN RELATION to COMMERCIAL FRUIT GROWING," by C. H. Hooper, F.R.H.S. 7d. post free from the British Bee Journal.

Office: 23 Bedford St., London, W.C.2.

The products of the Apiary, of Poultry and Farm Stock, of the Fruit and Vegetable Garden can be Advertised and Sold through

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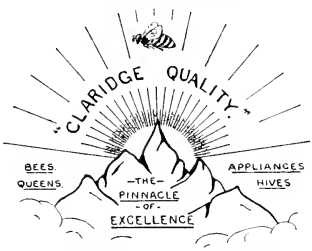
Newspaper.

Get a Copy—Thursday and Saturday, 3d. The "Bazaar" publishes also practical handbooks by experts. Send for full catalogue, post free from **WINDSOR HOUSE, Breams Buildings, LONDON, E.C.2**



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Full page	4 10 0
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Discount for a series of consecutive displayed advertisements:—Six insertions, 2½ per cent.; Twelve insertions, 5 per cent.; Twenty-six, 15 per cent.; Fifty-two, 30 per cent.

The "B.B.J." Ideal Candy-Making Thermometer.

This thermometer has been specially designed for making candy for bee food. In place of the usual scale progressing by two degrees, there are only two marks on the scale. The top mark shows the temperature to which the candy should be boiled. The bottom one when it is cool enough to commence stirring.

These are both engraved *on the glass* and are *accurate*. There are no calculations to be made as on the ordinary sugar boiler's

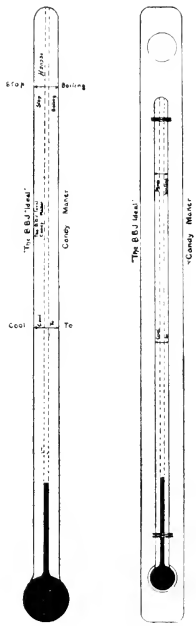

FIG. 1. FIG. 2.

thermometer with a full scale of degrees, which are not always accurate. A recipe for candy and full directions are sent out with each instrument. Any other candy recipe may be used. The thermometers can only be obtained from this office. As they are being sold at cost price it is not possible to supply appliance dealers.

Fig. 1, plain glass tube, price 4s.

Fig. 2.—Thermometer in brass case, 5s., packed in a neat cardboard case, postage 3d. We recommend the brass frames, as the tube being protected, it is not so likely to be broken. The frame is also plain, neat and easily cleaned.

"British Bee Journal" Office,

23, BEDFORD STREET, STRAND, LONDON, W.C.2.

For best bees, queens and appliances come to PEARSON & GALE, Marlborough.

OVERTON'S MEDICATED CANDY.

MADE FROM WHITE PURE CANE SUGAR.

GLASS TOP BOXES (1 or 2 lb.) ... ... 4 lb., 5/-; 7 lb., 8/3; 10 lb., 11/6; Post Free.
PLAIN TOP BOXES do. ... ... 4 lb. 4/9; 7 lb., 7/6; 10 lb., 10/-; do. do.

C. T. OVERTON & SONS, CRAWLEY, SUSSEX.

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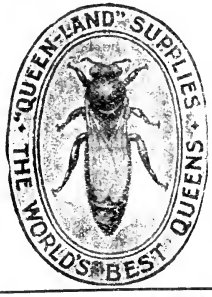

Premier Quality—Got rid of all others.

"In the year 1920 I purchased one of your 'White Star' Nuclei, and although, as you know, the season was very bad, I did exceedingly well with your bees, and I am ordering a further supply, *having got rid of all others.*"—C. W.

[Later] "I received the bees well packed and in good condition, only five dead bees in the lot. I can assure you I am well satisfied." Stairfoot, Barnsley, 1922.—C. W.

The only Pedigree strain bred by intense selection of both queen and drone breeding mothers for more than 30 years. Reduced Price List for 1923, free, of—

S. Simmins, Queenland, Heathfield, Sussex.

BEE CANDY.

Made from Pure Cane Sugar, and guaranteed free from Glucose. Prices:—

1 lb. at 1/-, post 9d. 4 lbs. 5/-, post free.
7 lbs. 8/- post free. 10 lbs. 11/- post free.

Special prices for large quantities on application. SYRUP in 7 lb., 14 lb. and 28 lb. tins.
Use the WORMIT Combined Feeding Board and Winter Cover, as advertised in issue of 24th August.
FEEDERS of every description. Full particulars in Illustrated Catalogue sent post free on application.

Dadant's New Patent Wired Foundation.

Supplied in the sheet, with wires embedded all ready for use.

SAVES TIME. SAVES LABOUR. SAVES MONEY.

Price only a little more than that of ordinary foundation.

Prevents sagging and gives a perfect comb.

Has been tested and proved for several years in hundreds of colonies.

Send for a sample pound and judge for yourself.

We are also making special frames to suit this foundation, but old frames, if in stock, can be adapted by the use of a special bottom bar.

R. STEELE & BRODIE,
Bee Appliance Works, WORMIT, SCOTLAND.

MR. BEE-KEEPER.—Never mind what Gladstone said in 1848, it will not pay you to be so **CONSERVATIVE** that you cannot leave your regular appliance dealer and accept our **LIBERAL** offer, to supply Candy, at a price that only just pays for the **LABOUR** involved.

4 lbs., **4/-**; 10 lbs., **9/-**, **post free.**
Made from pure White Cane Sugar.
Larger orders, **8½d.** per lb., f.o.r.
COBB BROS., 33, BEVAN ROAD, PLUMSTEAD.

STEEL'S SUPER CANDY.
4 lbs., **4/8**; 10 lbs., **10/-**; carriage paid.
Special quotations for quantities.
STEEL'S BEE HIVE WORKS,
WEST ASHLING, CHICHESTER.
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HAVE YOU READ "THE BEE WORLD"? If not, why not? Every number in itself is a useful literary work for practice and reference. Specimen copy free.—Offices: THE APIS CLUB, Port Hill House, Benson, Oxon.

The Bee-Keepers' Calendar.

NOVEMBER, 1922.

16 Thursday. "Season of mists and mellow fruitfulness,
Close bosom-friend of the maturing sun;
Conspiring with him now . . . .
to set budding more,
And still more, later flowers for the bees,
Until they think warm days will never cease;
For summer has o'erbrimmed their clammy cells."
Keats, "Ode to Autumn."

17 Friday. "Bees, with prophetic instinct of want had hoarded their honey
Till the hives overflowed."—*Longfellow, "Evangeline."*

18 Saturday. "Then may your Plants be prest with fruit
Nor Bee or Hive you have be mute."
Herrick "The Wassaile."

19 Sunday. "Thou must not come puffing or blowing unto them neither hastily stir among them nor resolutely defend thyself when they seem to threaten thee; but softly moving thy hand before thy face gently put them by; and lastly thou must be no stranger unto them."
Charles Butler, 1609.

20 Monday. "And if Marion should have
Once again her forest days,
. . . . . .
She would weep that her wild bees
Sang not to her—strange! that honey
Can't be got without hard money."—*Keats, "Robin Hood."*

21 Tuesday. "Long within had been spread the snow-white cloth on the table;
There stood the wheaten loaf and the honey fragrant with wild flowers."—*Longfellow, "Evangeline."*

22 Wednesday. "Or the yellow-banded bees,
Thro' half-open lattices
Coming in the scented breeze,
Fed thee, a child, lying alone,
With whitest honey in fairy gardens cull'd."
Tennyson, "Eleanore."

Climate and the Colour of Hive Bees.

Has climate any effect on the colour of our hive bees? We are prompted to ask this question because both we and other bee-keepers have noticed that if the continual introduction of Italian or other more or less yellow varieties of bees ceases, and the bees are left to nature and themselves so far as breeding is concerned, the colour gradually reverts back until finally the yellow markings almost or wholly disappear. There is a very interesting article in the *American Bee Journal* for last August from the pen of the late Dr. A. F. Bonney, to which we referred in the notice of his death. Dr. Bonney was a keen observer, and this is what he says on the subject under the heading "Apis Americana":—

"The only imported race of bees we should be able to keep pure in the United States would be one where climate and environment were identical with their nation habitat. For instance, the Italian might not change in California or parts of the South, but in the North would be certain to, owing to the excess of ultra-violet ray in the air, and I am not certain but that there is not a corner of our great nation where the yellow Italian will not turn dark in two or three years.

"What has become of the thousands, if not millions, of Italian queens and their progeny that have been imported during the last sixty years? Insects differ from other animals in that they are helpless against changes in climatic conditions. They cannot choose amount of moisture, temperature, elevation, direction and force of winds, or barometric pressure, and all insects change shape, size, colour, functions and habits as they approach low, wet grounds, sanded plains, gravelly slopes and wooded hills. One kind of rabbit, the so-called "Snow Shoe," has, from being forced to exist where deep snows are frequent or constant, developed a pair of hinder feet which are out of all proportion to its size. One would think to see its tracks that he was following a 40-pound beast, while I doubt if it will weigh 3.

"As everyone knows, animals living in the frigid region are white the most of the year, and a domestic cat shut up in an ice-box will turn white. Therefore, it is not at all surprising that the Italian bee as a distinctive race is soon extinguished, absorbed or lost. I cannot here find just the term to suit me, but they soon change colour. They must certainly gain in hardiness, or we'd soon have no bees.

"I have always considered the Italian bee an overrated yellow fraud. Had the Caucasian been introduced into the United States first, the Italian would never have been heard of. Persistent advertising has done the rest. I think I write from experience, for I have had both races in their purity, and the Caucasians were better honey producers, more gentle, worked earlier and later, and were very much more hardy than the Italian.

"A family of Scandinavians or other light-haired race brought to this country and isolated will lose their blonde characteristics in a few generations. Just so the Italian bee will darken, and then have only shape, size and disposition left, and in different parts of our great country different kinds of bees are being developed.

"For years now I have been giving close attention to artificial selection of bees as compared to natural selection. In the former I find I can produce almost any result I choose; in the latter there is no telling what one will get.

"As a result of breeding from my very best colonies year after year, I have produced a strain of bees which I see fit to call *Apis Americana*. It is a large bee, dark, reasonably gentle, quite hardy, and when I state that I averaged close to 225 pounds per colony in 1920 and 1921, I think I can claim I have a good strain, race, or breed of bees. I think the average in the United States for ten years past is below 40 pounds per colony."

* * * * * *

"In the past few seasons I have bought a considerable number of Italian queens and run them in comparison with an equal number of colonies of my artificially selected bees, and in every case the hybrids (if we must so call them) produced more honey, were more gentle, more industrious, and not more given to swarming.

"Why should I buy Italians, or any other breed of bees?"

A Dorset Yarn.

A Somerset bee-keeper who is also a basket maker writes that bees have not done well in his area, and that trade in baskets is at a low ebb. He has always had faith in "Him Who careth for all," even when he had come to the last few shillings. A cheque for sample cross-handled baskets was sent him. Bees in some places have been a failure. Two letters this week were full of lamentations. Yet Mr. Pinder, of Salisbury, offers the finest clover honey from the Wiltshire apiaries in quantity. Without a doubt the rich farming lands are the best for honey production. Not only is there clover and sainfoin, but fields of mustard are sown for sheep, or to plough in as a green enrichment for the soil. Mustard when in blossom is of enormous value for nectar; bees seem to leave everything else for this member of the crucifer family. Only those who have seen very large fields of it in good bee weather

can have any idea of its wonderful floriferousness. I saw in the Farnham district of Hants a huge field that had been in bloom some days, yellow from end to end, and when it was ploughed in with three teams of horses it looked really dangerous for the horses, but, being far from the apiary, no ill results happened to them.

The hill farms of Wiltshire, where roots are grown for sheep, have always a lot of charlock which escapes the hoe, which is always a continual feast for bees. That in the corn in May so soon gives out; the corn grows and stifles it; the flowers have not the amount of nectar, as the moisture is used up in the soil in the development of the corn stalks. Then in many of these fields where sheep are folded there is a lot of lucerne in the mixture of grasses and clovers. If the sheep have a free run these will be all eaten off before they flower, but where the sheep are folded over the land there is always plenty of blossom of both lucerne and clover. Again, from these districts comes the first-prize exhibits at the exhibitions; for instance, Mr. E. C. R. White, of Winterbourne Gunner. He has won many victories with these thick light honeys, as he has with his splendid clear wax. It is just the same in West Dorset. Hills and valleys, huge fields; one can go miles without seeing a house. At the different seasons of the year one can see from the hills huge fields of crimson clover, can smell the great breaks of beans when in blossom, and charlock can be seen among miles of corn. One bee-keeper wrote me he had an option on a house and land in this area. Would I advise him to accept, which I did, as it is a fine area for bees. As one gets to the borders of Devon the soil, which is very productive, has a red colour. On the Somerset border there is rock; yet the soil above is rich, and the bee flowers grow in great profusion. Then the trees of these areas are so enormous; the sycamores of West Dorset are very abundant. These give abundance of stores just when it is wanted most. Guide books all give advice as to the best places for apiaries, but the surest guide to these is to find the areas where the great weight of honey is harvested and exhibited, not go anywhere just because it is in the county, for all parts of the same county are not good for the production of honey. I know of some bee-keepers who never get but one rack of sections or one of shallows, but then their calling keeps them in the one locality.

Another writer wants me to give him advice as to best stocks for fruit trees, as so many bee-keepers are extending fruit culture; have even *bought land expressly for it*, which is a proof that the yarns of the Dorset fruit grower have been read by some of the bee-keepers, for they wish to do as we have done. If they plant black currants, gooseberries, raspberries and strawberries they will soon reap a reward for the outlay.

We have to move one of our lots of bees, as we have sold the land. We are taking them over toward the large parks of the wealthy, where the lime trees are of great size; where the woods are full of laurel 30 ft. high; streams with willows on either side. It should be all right for the bees, but the proof will be when the next year's results are to hand. J. J. KETTLE.

Jottings from Huntingdonshire

It is Armistice Day. We have just observed our silence on the tolling of the bell. Two minutes, and yet what a lot flashes through one's mind as we silently remember the dead. The hundreds of thousands who died in that great cause, the cause of freedom, and how unworthy we are showing ourselves of that great sacrifice! Hard by is a timbered farmhouse set in fertile fields, all bought seven years ago for the occupation of a son who was out in France. He fought for England on France's soil, and the soil of France has claimed him for ever. Here the house stands untenanted; a silent witness of what might have been but for the great war. Here he hoped to bring his bride; here she hoped to live and to help him in his work, sowing and reaping and gathering into barns. Alas! he is not; but we think of him in the great remembrance. There are others, too, who left the sheepfold and the plough and crossed the water to withstand a great foe; they withstood, and fell, and their cottage homesteads know them no more. Saddest of all, a mother sent four sons to uphold the flag of freedom. They did, and died. Brave lads, and braver mother who gave them up!

Some came back to find their gardens choked with weeds and their allotments derelict. They bravely set to work to make good at home as they had done abroad.

Is England doing her best to forget all this sorrow and grief and death? A week ago children were trying to make us jump by exploding fireworks at our heels. I ask them, "Why"? At once they answer, "Guy Fawkes"! Can it be possible that we let our youngsters commemorate a deliverance from a plot which happened three hundred and seventeen years ago, while deliverance from the greatest plot of history we let them forget?

As bee-keepers, what do we? Read the back numbers of the "B.B.J." and learn of the fellow-members of our craft who went forth to fight and came back to find hives emptied of bees but filled with wax moth larvæ and debris. Some of them have been able to restart; others have been less fortunate, and yet are longing to become once more keepers of bees and producers of honey. Have they received the help they should? We know how difficult it has been to keep pace with the demand for swarms, but yet why not spare a swarm to a brother who is down and almost out?

The season of 1922 has been trying, and we learn from the "Journal" that many stocks will not survive the winter, and that next season will open with decimated apiaries. Be it so. If those, say, with twelve stocks or over would give a swarm to a one-time bee-keeper what pleasure it should cause to giver and receiver!

I shall probably be told that the war has

been over long enough for any pre-war apiator to get restarted if he wished to do so. In one sense this is very true. But we must not forget that hundreds, yea thousands, of our fighting men have been unable to get employment since their demobilisation, and the beemen of this number have, therefore, been unable to afford the inflated prices of swarms or stocks, to say nothing of appliances. Besides all this, there are many ex-soldiers who are only just leaving sanatoriums or training centres, where armless and legless men have a trade taught to them. Some of these are in love with *Apis mellifica*, and will never be contented until they again hear and see the honey flies round about their dwellings. A one-armed man whom I helped last year will sit on his hive and smoke his pipe an hour at a time and experience that joy which only bee-lovers know.

Remembrance Day! I am glad it is to be so called. History to be written a decade hence—will it record loyalty or disloyalty to the glorious dead? When in London I note fewer pause at the Unknown Warrior's tomb, and scarcely a man takes off his hat as he passes the Cenotaph. We who are bee-keepers are more fraternal. Remembrance Day—"Lest we forget, lest we forget"—E. F. HEMMING.

Week-End Bee-Keeping.

By S. H. SMITH, Cambridge.

(*Continued from page* 545.)

After laughing and pounding each other for some minutes, we were both glad to separate and mop our heads. "£80 cash, you troglodyte," persisted D. B. "It's a sad case, old man. We'd better get back to the bees and realities," I answered.

We filled No. 3 with vapour smoke and ran in the queen. "I should have preferred to wait a couple of days, D.B., but the bees are ready for her, and we will hope for the best. We shall be able to remove at least one empty section rack by next Saturday, and in another week we shall have this stock ready for wintering." We then adjourned to the house.

The twins met me with reproachful looks, and showed me a small safe under which "Pious" had taken refuge on returning home. It had taken them a long time to coax him out and to calm him after his scare. Only by promising not to shout or frighten him in any way was I restored in their good graces. But they brightened up considerably when I said that if I owned an £80 cat that was to be paid for in a couple of days I'd put the cat in the safe and sit on said safe until the purchase was completed. Some minutes later they were trying to hoist Freda on top of the safe and to rope her down. But Freda refused to stay put.

After the children had retired D.B. brought out a bottle of Manzanilla, and inevitably the talk drifted back to bees. We agreed to defer all discussion of finance until the following Saturday.

"It appears to me," said Mrs. D.B., "that the soundest principle of bee education would be for the student to progress along the lines of the evolution in the craft. I should like to own a couple of skeps next year. I should like to learn along the lines of our forefathers before handling modern hives. I fancy I'd gather an experience impossible to be obtained by working directly on modern lines."

"Would you be willing to join us, Week-End," asked D.B., "if we put some of that cat-money into a larger apiary and experimented in raising some queens?"

"It would be a most agreeable, not to say a pious, idea. Nothing would please me better than to join you two in a common bee venture, no matter how small."

"Very good, Week-End. You asked me to be ready to talk business next Saturday. Be ready yourself. I don't think we shall disagree about terms."

"Would it not be better, Mr. Week-End, to try and breed bees that would resist disease and mites, than to concentrate so much on 'cures' or remedies? If you wanted to improve the bees in your apiary, how would you go about it?"

"That is a difficult question, dear lady. I've made too many mistakes to attempt any definite answer. Some years ago I tried reducing the number of stock by half every autumn, relying on my judgment as to the past performances and future promises of the selected queens to get results commensurate to the sacrifices. Yet next year I'd find that in many cases the stocks, headed by the condemned queens I'd sold or given away, surpassed in honey production and general vigour the best I had in my apiary."

"The queen bee differs from the fertile individuals of the other social insects, wasps, ants and termites, in that she is solely an egg-producing individual. The queens of the others can and do establish nests, making the necessary cells, provisioning them by their labour and rearing the young until these are numerous enough to take over this work. The queen bee is totally incapable of any such actions, and does not possess the necessary appendages to perform the tasks involved. How to act on her so that she may acquire any improved or new qualities is a problem. In a bee stock the neuters alone function in the activities of the colony. Any more profitable habits they might acquire cannot be transmitted, excepting possibly through the drones the 'laying workers' produce. We are driven back to the mutation theory. That is to say that variations may suddenly appear, and if they prove advantageous they will remain."

"You believe, then, that insects can acquire new habits?"

"Undoubtedly. Modern experimenters have stated a very good case. Marchal induced the peach scale to live on the robinia. And after a generation or two this peach scale could not maintain itself when retransplanted to the peach tree. Pictet put caterpillars that live on deciduous trees on to pines, and those that lived to the moth stage produced caterpillars that could no longer

live on trees with flat leaves. And there have been numerous other examples by modern workers showing that hereditary habits do take new turns. But these are all concerned with acquired changes common to the two sexes."

"We bee-keepers can and do try to improve the environment. We can control the shelter and influence the food, but we are up against it when it comes to climate—temperature and humidity. Queen bees raised in small numbers in strong colonies kept well supplied with good honey will undoubtedly be superior to any raised under less favourable conditions. We apply the same methods to raising drones. The most vigorous of these will be the successful ones. By exercising judgment we can influence a strain so that it preserves its vigour if we cannot increase it."

"Queens raised in strong stocks from eggs over an excluder, under which a good queen functions, may not be commercially profitable, but they will give satisfaction. Every bee-keeper owning a good stock should use this plan to get a few queen cells drawn out at the right time and under favourable conditions. Let us hope 1923 will give us an opportunity to try this plan in our joint apiary."

(*To be continued.*)

Unedited Letters of Huber.

(*Continued from page* 237.)

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THE STING OF THE BEES HAS BEEN GIVEN THEM FOR THEIR DEFENCE. — LIZARD KILLED IN A HIVE.—THE ODOUR OF THE STING IRRITATES THE BEES.

To Miss Elisa De Portes.
Lausanne, May 17, 1828.

The bite of the viper, so dangerous, is not at all to be feared when its venom has been drained by repeated biting. That which renders the venom of the bees so painful for us and so deadly for their natural enemies is also the presence, at the end of the two spears which compose the sting, of a bright drop of poison which shows itself on its forward point.

At the will of the irritated bee, the venom is carried, or rather forced, into the body of the enemy and causes its almost instantaneous death, for from the poison sack, located at the root of the sting, the poison has but a short space to travel towards its extremity in order to reach the full depth of the wound which the two spears have produced.

You now know what happened to the lizard of which I wrote a minute ago and how the bees get rid of usurpers. Will you now, my dear girl, take a few steps more with your friend? Please follow the thread which he has put in your hands, in order to help you out of the labyrinth in which you are now engaged with him.

The hives which are governed by a young and fertile queen and are filled with a numerous population are but little in danger of invasions; I have seen some that did not have to repulse a single attack or need to avenge a single insult during the entire year of existence; I say insults to avenge, because I must acknowledge that my cherished bees are decidedly vindictive; it is their failing and I must not conceal it from you.

One day I ran the risk of testing this myself; having caused a hive to be raised from its bottom to cleanse the latter, the person who was doing this for me probably touched and wounded a few workers. I heard the danger call; some hundreds of workers answered it, rushed out of the hive and upon me; my clothing and the promptness of my flight permitted me to reach the house without being stung. Remember my blindness and think of how little I could have done in my own defence at so critical a moment. Certainly I had to be thankful, and I feel so yet.

The greater number of the bees that had rushed at me returned home, but three or four remained which did all in their power to enter the parlour in which I had taken refuge, by flying against the windows and keeping it up for half an hour with a very remarkable fierceness. When I thought they had withdrawn and imagined I could go safely out of my retreat, one of the most furious workers threw herself upon the person who had taken my arm, stung him miserably under the eye, and died herself, leaving in the wound her sting and her entrails. I have often seen their resentment prolonged a much longer time.

Whenever my gardener was raking too near the hives, the workers that rested upon the ground, killed or wounded by the rake, were soon avenged. The danger call was heard within the hives; the gardener was often punished for his clumsiness.

During the two or three days following such excitement, no one could approach the apiary without suffering the effects of the offended bees' rancour. Those that had followed me with the fierceness of which I wrote, would stop sometimes long enough on the panes of the window to enable one to distinctly see the end of their abdomen; and the bright drops of poison on the end of their stings indicated that they had been drawn and poisoned for my benefit.

If the primary cause of their anger was not always noted by us, it was perhaps not so difficult to understand their prolonged anger. The cause was probably entirely natural.

My first thought was that the presence of the escaped poison, its odour probably received by the bees, might have an irritating action upon some of their organs. An experiment was to prove it to us: here is what I devised:

We introduced a few bees in a tube of small diameter, the length of which did not exceed 6 ins., its lower opening was hermetically closed, the other could be closed with the finger or in some other manner.

In order that the bees might give this tube

the odour of poison, they were slightly disturbed with a straw or the stem of a flower. Then the opening of the tube was presented at the entrance of a hive, after having uncovered it. The effect was immediate; a few bees came out of the hive at once and threw themselves upon us. We would have been stung, undoubtedly, if a veil, some gloves and a good hood had not protected us from their anger.

(*To be continued.*)

A Tropical Bees' Nest.

When I was waggoning through the Zambesi Hills the honey bird frequently tried to lead us to a bees' nest, and once or twice the boys chopped one out. It was within a few days of mid-winter, with plenty of flowers still in blossom and swarms flying about, though often, on days that would be accounted A1 in England, very few bees would go out foraging.

The bird and the boy soon found a nest that I should have overlooked, for instead of the steady come-and-go that I looked for, only about once in a minute would a bee go in or out.

The nest was in a small hollow no more than four feet from the ground. The entrance being bigger than they liked, the bees had put up a stout curtain of wax and propolis a little way within. The guards, a very sleepy squad, were coloured like Italians but a good deal smaller; when we found the comb it was rather a pigmy affair, but I was unable to measure the diameter of the cells. I dare say they ran nearly forty to the square inch.

This is how the boy went to work. It may furnish a tip to beemen at home. He stuffed up the entrance, then chopped a hole into the nest at the back. Every bee that came out there went back to the entrance and tried to get in, with the result that by the time the boy was ready to grope for the honey wtih his hands there was a large, perfectly quiet cluster hanging on the entrance side of the tree and not very many bees on the comb.

I saw several nests thus chopped out, and in none of them was a single sealed cell of honey. There was about as much brood, nearly all sealed, as would cover a standard comb on both sides, and enough open honey round it to feed the population for a day. We had evidently lighted on swarms that had been in their new quarters only three weeks. In a few days more the flying force would be on the up-grade, then the little nest would gradually become crowded, and off would go a little swarm to repeat the process. Tropical bees are by no means ambitious. Like the human inhabitants of that climate, they find life easy and are content to make both ends meet.

At big blossoming times, before and after Christmas, the boys bring in plenty of honey, but I think it is always thin and poor. A strong hive that would cook it well before sealing would probably make a thick, sound honey of the same nectar. Perhaps European bees could be got to do this in their first season or so, but I expect they would soon find so much toil unnecessary and go in for a glad hand-to-mouth, perpetually-swarming existence. With new queens from England every year something might be done, but at present that would mean at least three weeks in the travelling cage, besides which the importation of foreign bees is prohibited in the Union.

G. G. Desmond, Sheepscombe, Glos.

The Development of the Apis Club.

Readers of the "Journal" will be very sorry to learn that Dr. Abushâdy will shortly be leaving England. For months this has been contemplated under the pressure of his family circumstances, but his public engagements and responsibilities prolonged his stay, at the request of his colleagues, till the end of this month. There is a consolation, however, in the knowledge that the Apis Club is now in a stronger position than ever before and that the organisation effected will ensure continued progress to the movement.

The following is an extract from the directors' report presented to the Governors of the Club on the occasion of their annual general meeting, which will be held on November 25th :—

As far back as 1920, Dr. Abushâdy's need to reside abroad, in view of pressing family claims, was known to the directors. In the interests of the work, however, he continued to defer his departure until it has become imperative for him to decide on leaving England by the end of this year at the latest, his contention being that the position of the Club and the "Bee World" has become sufficiently strong that his departure could not possibly be harmful. The matter was brought up for discussion at a meeting of directors held on October 22, and after a long consideration of the futile attempts made to find a successor in this country to Dr. Abushâdy, it was finally resolved, Dr. Abushâdy agreeing, that he should be allowed to maintain his position and be granted a permanent leave of absence. In arriving at this decision the directors had in mind : (1) The fact that Dr. Abushâdy has already spent half of his active life in this country, mostly on the study and practice of bee culture, and consequently he is thoroughly acquainted with the inner aspects of bee-keeping conditions in Britain —a knowledge which cannot fail him in future, irrespective of his place of residence. (2) As founder of the "Apis Club" and the "Bee World" his vision and judgment of their future possibilities and his experience of men and methods under various conditions is of special value to retain for ensuring satis-

factory development. (3) Our movement being of an international character, requires a great stock of international sympathy and a force for co-ordinating its ramifications—a task to which Dr. Abushâdy has unsparingly applied himself in the past and is eminently suited to continue in future. (4) Dr. Abushâdy's willingness, failing other alternatives, not only to undertake the editorship of the "Bee World," but to continue in addition his other duties as general organiser and managing director at half his salary, namely, £250, of which he will accept in cash payment only £104 per annum, and the balance in shares, thus assisting financially by this saving, even after due allowance for further office assistance at Benson. (5) Although unanimous, this decision of the directors is open to confirmation, modification, or rejection by this meeting, should an alternative and a better proposal be available, as Dr. Abushâdy has obviously no personal gain in conceding the wishes of his colleagues, and in fact his acceptance of this trust is a grave responsibility which will be pluckily shouldered at the expense of his personal interests for the sake of an ideal towards which he has contributed so much in the past.

The directors deem it fitting in this connection to place on record their great personal appreciation—which beyond doubt is widely shared throughout the bee-keeping world—of the unselfish and gigantic efforts which their Chairman unfalteringly rendered to ensure the continued success of the "Apis Club" and the "Bee World" in the face of great odds. Not only has he bound himself heart and soul during the past years to the claims of the work on his time and energy, but he also did not hesitate repeatedly to render appreciable financial assistance, without any interest to himself. On the eve of his departure he is willingly utilising a large share of the proceeds of his effects to further assist the work. It is right also to mention that although Dr. Abushâdy waived his director's fee and spontaneously suggested a greatly reduced salary for himself, in effect he has not been receiving at all any salary for a long time. Furthermore, he has not yet availed himself of the unanimous resolution adopted at the extraordinary general meeting held on October 30, 1920, regarding the allotment to him of shares in consideration of the last service agreement, which has been in operation since November 1, 1920, and also in view of his personal sacrifices which were fully appreciated by that meeting. It will be seen, therefore, that the meeting will *not* in the least be rendering a personal service or a token of gratitude to Dr. Abushâdy by confirming his retention of his present position as aforementioned, and should therefore be guided in their decision purely by the interests of the movement. Our Chairman, we would finally emphasise, is the last person to be anxious to retain his present position irrespective of his place of residence: nevertheless, he will equally be the last person to lend a deaf ear to our appeals to his continued co-operation, should this be considered vital. It is for the meeting, unfettered, to arrive at a final decision in this momentous matter."

New Forest Bee-Keeping.

I hardly know how to frame a heading for this letter, as I fear I must stray beyond the confines of the New Forest if I am to communicate all I have to tell. For ten days ago I was at Cheltenham and bethought me of Mr. A. H. Bowen and his bees. A note to their owner produced at once a cordial invitation to visit his apiaries, for he has distributed his 130 odd stocks among three or four different sites, all high on the Cotswolds, and from six to eight miles outside Cheltenham. Mr. Bowen bore his Majesty's commission during the war, and, naturally, has had much leeway to make up since. It is not difficult, therefore, to realise how his present employment effectually keeps his tall, spare, active frame in training. Unfortunately Mr. Bowen could not accompany me, and so I could only content myself with a general survey of two of his principal apiaries containing perhaps, seventy to eighty hives in all. The first was delightfully sited on a natural bastion jutting from a steep hill-side and immediately over a tunnel carrying the Great Western line to Birmingham. The second I found just behind the Andoversford Hotel, in what had been a hanging wood, but is now a bushy enclosure. Mr. Bowen's bees seemed very uniform in type, nearly pure Italians, and I could see that it is the production of bees, of swarms, nuclei and queens, rather than that of honey, which is Mr. Bowen's chief aim. His hives were serviceable, home-made structures, and mostly devoid of legs, a feature which enabled this season's rank verdure to obstruct the entrance in some cases. But one can dimly realise what the looking after 130 stocks from a distance of six miles and more must mean, and how impossible it must be to cope with Nature's exuberance as well! Mr. Bowen hopes to attain to 250 hives and more, and I am sure all who hope to see British bee-keeping come into its own will wish him every success.

During a pleasant week-end visit to East Dorset I contrived to pay Mr. J. J. Kettle a brief call, on July 24. We found him beaming with enthusiasm, a bee-veil round his hat, and after a glance at his home apiary were hurried off to see the bushels of ripening fruit, which his bees had set for him. Pears, apples, and perpetual-fruiting raspberries constitute only a moiety of Mr. Kettle's stock-in-trade, but of these there were vast quantities. Should any reader be suffering from a fit of the blues, let me suggest that he hies him forthwith to Corfe Mullen, and there absorbs the anodyne of Mr. Kettle's society for an hour or two. Believe me, he will leave feeling a new man!

And now for my theme proper, the New Forest B. K. A. Yesterday afternoon, July 29, there assembled, by his kind invitation, some fifteen to twenty of our members at the home of Mr. H. Bright, our esteemed hon. sec. and expert. After a brief committee meeting to decide details of our forthcoming honey show, we all adjourned to Mr. Bright's garden, where stood his eighteen odd hives. Last year Mr. Bright's apiary was reduced

by disease and wasting to two stocks, and from these few survivors has he raised his present population. Truly a remarkable achievement, especially when bee-keeping has to be confined to after-work hours.

Passing from hive to hive, Mr. Bright disclosed their mysteries to us, and included in his programme both driving and hiving of a swarm. But Mr. Bright's most remarkable exhibit was that of a stock composed of two swarms, which issued and were united by him on July 12. In seventeen days this stock had not only drawn out and filled with comb all ten frames below, but had also filled and nearly sealed three racks of sections. It had been started, too, on foundation only. Mr. Bright added three more section racks in our presence, making six in all.

This, surely, is a most remarkable performance, especially when the unfavourable weather conditions are taken into account.

I will not dilate upon Mr. Bright's masterly manipulation. It is an education to see him at work, and he seems to cast a spell over his bees. For the day was dull and drizzly, we all walked and stood round the hives, many of us discarding our veils, and yet only one casualty was sustained by the party.

At 5 p.m. Mrs. Bright called us in to tea, a sumptuous repast it was, too, and one to which we did full justice. If the lemon sponge-cake was Mrs. Bright's handiwork she is as great an artist in the culinary department as is her husband in bee-keeping.

Mr. Bright, who lives between Lymington and Brockenhurst, is fortunate in having heather at his door. But so have most of us dwellers in and around the Forest, and it behoves us to take full advantage of the August heather flow, denied to our less fortunate brethren, and so make up for the disappointment of our midsummer monsoon.

July 31, 1922. H. W. K.

An Appeal.

I am interested in a man who is unemployed, but making a plucky fight to carry on by selling garden produce.

He lives in an ideal spot for bees, and I am prepared to supply the bees and help him to manage them if other bee-keepers would contribute small sums towards the purchase of two W.B.C. hives and appliances. £5 would meet the case.

I wonder if you would insert this appeal and receive the contributions.

I would, of course, give you a full account of its expenditure, with receipts, etc., and the name of the clergyman who will co-operate with me in assisting the man. — H. O. Morgan, 35, Cowper Road, Redland, Bristol.

[We are always pleased to help any deserving case. No doubt, there are great numbers of unemployed who are "carrying on" as best they may, and it is obviously impossible to help them all. However, if any of our readers feel inclined to give assistance in the above instance, donations may be sent to us or direct to Mr. Morgan. —Eds.]

Glasgow and District Bee-Keepers' Association.

The above Association held their opening meeting on the evening of November 6, which was a huge success. Mr. J. Tinsley, F.E.S., lecturer for West of Scotland, opened the meeting; his subject was "The Wintering of Stocks." He was very clear on the following three points:—Re-queening of stocks immediately after the honey flow; bee-keepers should give nothing but pure honey for food; sugar should never be given when one has honey.

He also laid great stress on the necessity of having hives damp proof, for it must be admitted that dampness is one of the bee's greatest enemies.

After much discussion, Mr. J. Scouller (president) thanked Mr. Tinsley on behalf of the Association for his lecture.—J. Hunt, hon. secretary.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real name and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

Using an Excluder.

[10713] Living as I do in a heather district, I read with pleasure Mr. Wilson's lecture on "Comb Honey Production," and I can endorse all he said, with one exception, viz., the use of excluder under sections. My experience is that the excluder is an unmitigated nuisance under sections, as it hinders the bees very much, and is fastened so securely by the bees that a novice is likely to have a warm time getting it off.

But someone may ask, "How can I keep the queen out of the sections?" and I answer, "Scrap those flimsy brood frames with thin, narrow top bars and a sawcut, and if your dealer cannot supply a frame with a good, strong top bar an inch wide and *without* the sawcut, scrap him, too.

There are others who will supply it, or I could not get mine, but they will cost about 2d. per dozen more, and be worth about 50 per cent. more; therefore cheaper in the end, also they will not sag. Another objection I have to the excluder is that I believe it is frequently the cause of swarming, as the bees cannot so easily pass into the sections, which is bad for bees and bee-keeper, as in good weather bees work at a furious rate, seeming to know the harvest is of short duration, which in itself goes to prove Mr. Wilson is right in saying that when a stock swarms the honey harvest is spoilt for that stock just because there is

not time to recover. I wonder how many thousands of bees are cut in two when sliding sections on and off the excluder.

[We never cut any in two, for the simple reason we should not dream of "sliding" a section rack either on or off.—EDS.]

Bait sections are good for getting bees into sections, but sometimes one has not enough. In that case fit a rack of shallow frames with thin super foundation, and when they are drawn out remove and cut comb to fit sections, replacing with another rack, unless one *wants* a swarm.

In taking off sections I find the carbolic cloth of very little use, and the only smoker I have ever used is a pipe of tobacco, which answers very well, and without a veil.

I would not trouble you with this letter were it not that many novices on reading the above-mentioned lecture would think it to be the last word on the subject, being in the *B.B.J.*, and act accordingly. As I often advise beginners to read the Journal, you can guess what would happen if they found a difference between it and—Yours respectfully, W. MIST.

Queen Taking an Airing.

[10714] November 11.—Bright sunshine. Temperature in shade at 1 p.m. 62 deg. Fah. Queen taking a walk on flight-board.

This forenoon was so bright, warm, and spring-like that on my return home at 1 o'clock I looked at the thermometer, which showed a shade temperature of 62. Then, going to the bees, I noticed two stocks flying very freely and others slightly. On closer examination of these last, I noticed a few bees on the flight board of one and the queen out with them. She was on the board for five minutes while I watched her. At first the other bees seemed to take little notice of her, then they appeared to gather round and plume her, and after two or three minutes of this treatment she disappeared into the hive. When closing down the hives for the winter, I noticed that this, a strong stock, was short of stores, so I fed up rapidly with warm syrup. During the last fortnight I have noticed some fouling of the flight board, and fear I am in for loss, but that a queen should take such a walk in mid-November is a thing I had not thought of. Truly one cannot say just what bees will or will not do. We have had a very poor season here. What the bees gathered I have left for winter stores. Swarms were plentiful; honey scarce.

P. MURRAY THOMSON.

The Season in Surrey.

[10715] I much regret to read in the Journal of October 12 that the past year may be put down from the honey point as an all round failure.

However, we must not be downhearted, and I am sure you will be pleased to know that I have had a very good time, and trust there are many more who have done as well. Although only a small bee-keeper of 25 years' experience, the following results have been obtained during the last two years:—Cleared out whilst on Service; restarted with bar-frame hive with swarm presented Empire Day, 1921, from which I took 40 lbs. of section honey last year.

Wintered them all right, and this year have sold good quality sections for retail amounting to £4, and have now used and put by for my own use £2 worth. In addition to this, I have some 40 unfinished sections owing to the wet July and August, which I have returned to my stock. In addition to my crop of honey they also swarmed, and the swarm has also its share of the unfinished sections.

So in a nutshell one stock has given me £6 in cash, one swarm and a good deal of honey for feeding; not so bad, do you think? This is the first time I have written to your valuable paper as am not much of a writer, but I have had many interesting talks with bee-keepers whilst on Service, and no doubt many will remember me when I sign myself—S. J. RIDDELL, formerly 1st Air Mechanic and Sec. Regt. Institute, Royal Air Force, Cranwell, near Sleaford, Lincs.

The Question of In-Breeding.

[10716] I presume that it must be from defective understanding that I never am able to see the force of the term, in-breeding. What exactly is meant by this? Does it mean that Mother Nature has been so careless of the well-being of some of her children that she made this apparently fatal mistake? Honestly, I think it more likely to be man who is wrong, and who, by his tampering with the delicate adjustment Nature sets up, has caused degeneration.

After all, what proof have we that in-breeding takes place to any great extent? To be sure on this point many other points have to be considered, one of which certainly is: How far do drones travel from their parent hive during a season? To what distance does the queen fly on her marriage flight? These two cleared up, we could proceed to tackle a few others, and, finally, try and find out if the in-breeding does take place—whether Nature does not perhaps know what is best. —G. JAMES FLASHMAN.

Notices to Correspondents

A. P. (Cannock).—*How bees utilise candy.*—If candy is put on as soon as syrup feeding ceases and before the cold weather comes, the bees will liquefy it, and store it in the combs. That is the reason we advise that candy should not be put on until later, so that the bees have a chance of using up the unsealed stores. During the cold weather the candy is consumed at once, not stored in the cells. If honey is given in a bottle feeder, which we presume is the kind you mean, the honey may drip when the bees are torpid; or, on the other hand, it may granulate and be useless to the bees, as they could not get at it.

Bee Shows to Come.

November 16, at Beverley, in connection with the Beverley and District Chrysanthemum Society's Show. Open Classes.—Schedules from T. T. Taylor, Hon. Sec., Beverley and District B.K.A., 137, Keldgate, Beverley.

Special Prepaid Advertisements.

One Penny per Word

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BEE EXPERT would like to rent small Mixed Holding, up to 10 acres, in good honey district, suitable fruit, fowls, bees, etc.—Information to Box No. 96, B.B.J. Office, 23, Bedford Street, Strand, W.C.2, will be appreciated. r.k.70

FINEST quality Buckinghamshire Honey from the Chiltern Hills, 56 lbs., 70s.; 28 lbs., 40s., carriage forward; tins free.—STEVENSON, Thames View, Flackwell Heath, High Wycombe, Bucks. r.k.60

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BERKSHIRE HONEY, guaranteed pure, 1s. 6d. lb., in 7-, 14-, 28-lb. tins; tins and carriage free on 28 lbs.—DR. BELL, Lambourn, Berks. r.k.50

THE World's Famous Raspberry, Lloyd George, perpetual fruiting, 10s. dozen, 60s. and 70s. per 100.—J. J. KETTLE, The Violet Farm, Corfe Mullen, Wimborne, Dorset. h.78

TAYLOR'S SOFT WHITE CANDY.

Manufactured from guaranteed pure White Cane Sugar

1/- per lb., post extra,

or 4lb. parcel, **5/-** post free ; 7lb., **8/-** post free ; 10lb., **11/-** post free.

Special quotations for large quantities.

Feeders, Quilts and Winter Appliances of every description. Illustrated Catalogue post free on application.

E. H. TAYLOR, Ltd., Beehive Works, WELWYN, HERTS.

PRIVATE ADVERTISEMENTS.

HEATHER HONEY.—For Sale, by an English bee-keeper, located in the heather district of France, his 1922 crop of Heather Honey, comprising over 2 tons of A1 quality, equal to the finest Scotch produce. It is packed in casks averaging 2½ cwts., and as the price is right it is well worth the attention of bottlers. Samples sent free and price to bona-fide buyers.—W. WILSON, Laurent par Lavardac, Lot-et-Garonne, France. r.k.62

TRIUMPH MOTOR CYCLE, good condition; exchange for May Swarms and Apparatus with small cash adjustment.—Box No. 95, BRITISH BEE JOURNAL Office, 23, Bedford Street, Strand, W.C.2. k.67

1 STONE Cambridgeshire Honey, tin free, £3 5s., carriage paid.—H. GREEN, Wilburton, near Ely, Cambs k.68

SPECIAL OFFER.—Honey in 1-lb. nominal tinted screw-top bottles, 17s. per dozen; sample bottle 2s. — HARVEY, The Apiarist, Andover. k.71

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THE SOUTH HAMPSHIRE APIARIES beg to announce they are now booking orders for next season, and would advise their customers to book early to ensure first delivery.—Catalogue on application to H. E. NEWTON, New Milton, Hants.

HONEY FOR BEE FEEDING.—West Indian, new, 56 lbs. 38s. 6d.; Californian, old crop, 60 lbs. 30s.; carriage paid; reduction quantities; samples on application.—LONDON TRADING AGENCY, 32, St. Mary Axe, London, E.C.3. r.k.72

RYALL'S ADVICE ON WIGHT-ACARINE TROUBLES, 5s. 6d.—8, Ospringe Road, N.W.5. r.k.67

PURE CANE CANDY.—4 lbs., 4s. 6d.; 7 lbs., 7s. 3d.; 10 lbs., 10s.; post free.—STONE, Chelsea Road, Easton, Bristol. k.65

SUPERFINE CANDY.—None better. 7 lbs., 7s. 6d.; 10 lbs., 10s., post free.—TICKELL, Westbourne Apiary, Cheltenham. r.k.49

STRICTLY BUSINESS.—Flavine—S. Bee Candy, 4 lbs., 5s.; 6 lbs., 7s.; 10 lbs., 11s.; 20 lbs., 21s. Larger quantities by passenger or goods train at a reduction in price.—S. H. SMITH, 30, Maid's Causeway, Cambridge. r.k.63

PURE CLOVER HONEY in 7-lb. tins, an Ideal Xmas Gift.—PEARSON & GALE, Marlborough.

"Pollination of Fruit in Relation to Commercial Fruit Growing."

By C. H. HOOPER, F.R.H.S.

Now is the time to select the varieties of Fruit Trees you intend planting. An expenditure of 7d. now will be pounds into your pocket in the future. Get a copy of "POLLINATION OF FRUIT IN RELATION to COMMERCIAL FRUIT GROWING," by C. H. Hooper, F.R.H.S. 7d. post free from the British Bee Journal.

Office : 23 Bedford St., London, W.C.2.

The products of the Apiary, of Poultry and Farm Stock, of the Fruit and Vegetable Garden can be Advertised and Sold through

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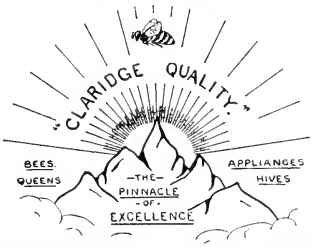
Get a Copy—Thursday and Saturday, 3d. The "Bazaar" publishes also practical handbooks by experts. Send for full catalogue, post free from WINDSOR HOUSE, Breams Buildings, LONDON, E.C 2



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Discount for a series of consecutive displayed advertisements:—Six insertions, 2½ per cent.; Twelve insertions, 5 per cent.; Twenty-six, 15 per cent.; Fifty-two, 30 per cent.

The "B.B.J." Ideal Candy-Making Thermometer.

This thermometer has been specially designed for making candy for bee food. In place of the usual scale progressing by two degrees, there are only two marks on the scale. The top mark shows the temperature to which the candy should be boiled. The bottom one when it is cool enough to commence stirring.

These are both engraved *on the glass* and are *accurate*. There are no calculators to be made as on the ordinary sugar boiler's

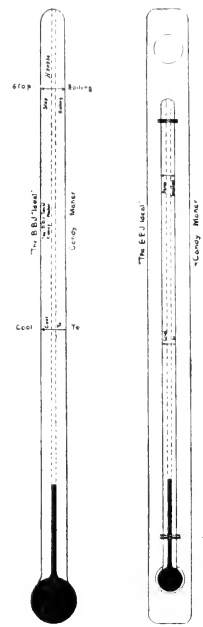

FIG. 1. FIG. 2.

thermometer with a full scale of degrees, which are not always accurate. A recipe for candy and full directions are sent out with each instrument. Any other candy recipe may be used. The thermometers can only be obtained from this office. As they are being sold at cost price it is not possible to supply appliance dealers.

Fig. 1, plain glass tube, price 4s.

Fig. 2.—Thermometer in brass case, 5s., packed in a neat cardboard case, postage 3d. We recommend the brass frames, as the tube being protected, it is not so likely to be broken. The frame is also plain, neat and easily cleaned.

"British Bee Journal" Office,

23, BEDFORD STREET, STRAND, LONDON, W.C.2.

For best bees, queens and appliances come to PEARSON & GALE, Marlborough.

OVERTON'S MEDICATED CANDY.

MADE FROM WHITE PURE CANE SUGAR.

GLASS TOP BOXES (1 or 2 lb.) ... ... 4 lb., 5/-; 7 lb., 8/3; 10 lb., 11/6; Post Free.
PLAIN TOP BOXES do. ... ... 4 lb., 4/9; 7 lb., 7/6; 10 lb., 10/-; do. do.

C. T. OVERTON & SONS, CRAWLEY, SUSSEX.

ESTABLISHED 1870.

Premier Quality—Got rid of all others.

"In the year 1920 I purchased one of your 'White Star' Nuclei, and although, as you know, the season was very bad, I did exceedingly well with your bees, and I am ordering a further supply, *having got rid of all others.*"—C. W.

[Later] "I received the bees well packed and in good condition, only five dead bees in the lot. I can assure you I am well satisfied." Stairfoot, Barnsley, 1922.—C. W.

The only Pedigree strain bred by intense selection of both queen and drone breeding mothers for more than 30 years. Reduced Price List for 1923, free, of—

S. Simmins, Queenland, Heathfield, Sussex.

BEE CANDY.

Made from Pure Cane Sugar, and guaranteed free from Glucose. Prices:—

1 lb. at 1/-, post 9d. 4 lbs. 5/-, post free.
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Special prices for large quantities on application. SYRUP in 7 lb., 14 lb. and 28 lb. tins.
Use the WORMIT Combined Feeding Board and Winter Cover, as advertised in issue of 24th August.
FEEDERS of every description. Full particulars in Illustrated Catalogue sent post free on application.

Dadant's New Patent Wired Foundation.

Supplied in the sheet, with wires embedded all ready for use.

SAVES TIME. SAVES LABOUR. SAVES MONEY.

Price only a little more than that of ordinary foundation.

Prevents sagging and gives a perfect comb.

Has been tested and proved for several years in hundreds of colonies.

Send for a sample pound and judge for yourself.

We are also making special frames to suit this foundation, but old frames, if in stock, can be adapted by the use of a special bottom bar.

R. STEELE & BRODIE,
Bee Appliance Works, WORMIT, SCOTLAND.

CANDY 4 lb. 4/-; 10 lb. 9/-; POST FREE.

LARGER ORDERS 8½d. PER LB. F.O.R.

COBB BROS., 33, Bevan Road, Plumstead.

STEEL'S SUPER CANDY.
4 lbs., **4/8**; 10 lbs., **10/-**; carriage paid.
Special quotations for quantities.
STEEL'S BEE HIVE WORKS,
WEST ASHLING, CHICHESTER.
Branch: THE BEE HIVE, BROYLE ROAD, CHICHESTER.

HAVE YOU READ "THE BEE WORLD"? If not, why not? Every number in itself is a useful literary work for practice and reference. Specimen copy free.—Offices: THE APIS CLUB, Port Hill House, Benson, Oxon.

The Bee-Keepers' Calendar.

NOVEMBER, 1922.

23 Thursday. "When butterflies will make side-leaps,
As though escaped from Nature's hand
Ere perfect quite; and bees will stand
Upon their heads in fragrant deeps."
W. H. Davies, "Days too Short."

24 Friday. "A kiss is but a kiss now! and no wave
Of a great flood that whirls me to the sea.
But, as you will! we'll sit contentedly
And eat our pot of honey on the grave."
Meredith, "Modern Love."

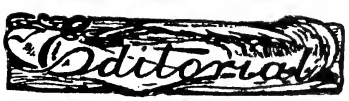
25 Saturday. "The bee that once did seek thee,
And build thy perfumed ambers up his hive,
And swoon in thee for joy, till scarce alive—
If passing now, would blindly overlook thee."
E. B. Browning, "A Dead Rose."

26 Sunday. "And some by lot are warders of the gate,
And scan the clouds in turn and watch for showers,
Or else relieve homecomers of their load,
Or all unite and chase the lazy drones
Across the Border." *Virgil, Georgics, Book IV.*

27 Monday. "Ah, see where robb'd, and murder'd, in that pit
Lies the still heaving hive! at evening snatch'd
. . . . . .
And fixed o'er sulphur."—*Thomson, "Autumn."*

28 Tuesday. "The squirrel gloats on his accomplished hoard,
The ants have brimm'd their garners with ripe grain,
And honey-bees have stored
The sweets of summer in their luscious cells."
T. Hood, "Autumn."

29 Wednesday. "The ground-squirrel gaily chirps by his den,
And the wilding bee hums merrily by."
W. C. Bryant, "The Gladness of Nature."



Articles on Bee-Keeping.

Much useful information is nowadays given in many of the daily and weekly newspapers, and more regularly in technical papers dealing with gardening, poultry-keeping and allied subjects. Unfortunately the writers often have more zeal than knowledge, or are not sufficiently careful as to what they write. Mistakes are therefore made which, though only ridiculous to the experienced bee-keeper, may lead the beginner into trouble. Not the least of these mistakes is the confusion of terms used by many bee-keepers. As an instance, we had a letter a few days ago asking for a plain definition of a swarm and a cast, the writer having had so many contradictory statements as to what constituted one or the other, he was quite bewildered. This confusion of terms we have pointed out a number of times at the risk of being considered pedantic.

We have had several examples of these things brought to our notice by a corre-

spondent, and have ourselves noticed many others in our press cuttings. In the *Preston Guardian* a writer, who should know better, states: "In the last days of July young queens were carrying casts from well-established hives, carrying them away in spite of wet or threatening weather." Of course an experienced bee-keeper would know what he means, but the statement is altogether absurd. The great majority of readers of the ordinary newspaper know nothing of bees, and might be pardoned if they wondered how a young queen *carried a cast* and what the whole thing meant, anyway. Does she carry it in a bag or a basket?

A correspondent sends us a cutting from *Gardening Illustrated* for September 16, in which there is an article with the sub-title, "Seasonable Bee-keeping" over the signature of "Seejee." It starts off, "Those who have been experiencing fine hot weather will now be extracting some of the honey." Is this "seasonable" in the middle of September? "As soon as a comb is completely sealed over, take it out and replace with an empty one. Extract this full one and put the honey in a ripener." As our correspondent remarks, "What a game!" Further on we are told, "When the first super is about two-thirds full of honey, then it is time to give the second super, which must be put under the first." This in the middle of September, and how is the first super to become "two-thirds full of honey" if odd combs are taken out as they are sealed? There are other inaccuracies and loose statements in the same article which we have not room to print.

We have no desire to discourage bee-keepers endeavouring to give instruction to others by writing Press articles, but we would urge them to first consider well if they have the necessary experience—the art of bee-keeping is not mastered in one or two seasons. Then when the article is written to read it through very carefully and endeavour to read it *from the beginner's point of view*. Make certain that the instructions given are not contradictory, confusing or misleading, and that the *correct terms are used*. We have a gem from the *Aberdeen Journal* which we would like to print in its entirety—extracts would spoil it but space will not permit now, so we must reserve it for next week.

A Dorset Yarn.

Guide books tell us of many enemies of bees, but most of them very rarely do much harm. For instance, the Death's Head moth I have never seen on our hives. Sparrows will eat up the drones. Toads are a terror, but have not seen a lot of writing about the large Dragon Fly. Have seen it catch white butterflies, strip off the wings at almost the same instant, and dart away. Staying with us this last three weeks we have had a gentleman from Fareham, where the hives are by the side of the woods. Between that town and Litchfield there is a stream of water close by plenty of wet ditches. These insects (dragon flies) live in the water during their larval existence, and only fly about in the mating season. This last summer they took to catching bees quite close to the hives, and were having quite a lot of them. The owner was a good shot; he did not miss many rabbits before he went into the army; he was a better shot after, as he did a lot of sniping in France. He would sit at his door and shoot these dragon flies. Whether he shot many bees as well I cannot say, but after a week's watching he had killed all the flies. They may have had a sweet taste, but if they had not been stopped it would have meant quite a great loss of bees. These insects are terrible feeders in their larval state, also as perfect insects; are very beautiful and very variable. It was only the very large one that was shot by the bee-keeper. He had a system of stopping robbing, when I was up last summer, by claying the hive entrance with plastic loam and clay, making one hole with a lead pencil, so that only one bee could get in or out at a time. His were all from wild stocks found in the woods, and have increased as the years go on.

I have seen fowls eat bees; they seem to get hold of them by the thorax. Have not seen that they sting when taken in this manner, but in summer, when colonies are very strong, fowls give them a wide berth. If a bee drops into the water where young ducks are, it is sure to be watched very carefully by them, they not being in a hurry to try to eat it. Instinct seems to make them chary of bees, but they will take a crane fly instantly if it gets in the water, and will run after them in flight.

The bee-keeper would have taken a long time in catching these beautiful neuroptera with a net, but it was soon stopped with a gun. I doubt if such another instance of love for bees would have brought a gun to war against dragon flies.

In this village two men fought because one had hurt the other's dog. So great was the dog owner's fury that after well punishing the other with his fist he picked him up and threw him over the hedge and broke his leg. In defence of a dog a man did this; in defence of his bees the bee-keeper used a gun. Have seen another bee-keeper who also keeps fowls wait hours for a fox who thought it had a better right to them than the man who raised them; but "everything

comes to him who waits"; he had the fox, and his wife wears the skin round her shoulders. Foxes are sure to come again where they have had a taste of fowls. We lost twenty-seven in one night, but the next day many in the village went to the foxes' home in the woods, dug them out and shot them.

Mice seem to be very fond of making a winter home over the bees; they easily bite a way in the hive entrance. We have placed a thin piece of flat binding iron that is used around thin boxes to give them safety in transit; this prevents the mice eating the entrance. Rats are worse, as the smell of them seems to demoralise the bees. They are apt to bite a hole through the bottom and sides of the hive in order to get in; and if they have been amongst the combs, bees will not stay in the hive when run in after swarming. I had one swarm come out three times, and the bees only stayed after the two combs which smelt of rats were removed.

Slugs will get in sometimes, and have found small snails. Toads are beaten if the hive has no sloping board to the ground level. We like a wide alighting board, but not low enough for toads to get up. After the massacre of the drones toads are sure to be round the hives; the smell of so many must be very appetising. One bee-keeper tells me he has seen the hedgehog eating them round the hives after the general expulsion, as many of the drones crawl round the hives in the grass, not daring to enter again.

J. J. KETTLE.

Week-End Bee-Keeping.

By S. H. SMITH, CAMBRIDGE.

(*Continued from page 557.*)

"Considering that bee-culture is one of the oldest human crafts, Mr. Week-End, it appears to me rather remarkable that so little progress has been made in rearing better bees. 'Nature' has produced a wonderful organic structure in the honey bee, or else wild bee colonies would not exist to-day. The fault in our apiaries must lie in our handling of the 'Nurture' part. The important benefits in the human home are not all due to organic inheritance; environment plays a great part. A child may possess every organic structure in the highest degree, yet if a good social inheritance is lacking, it will not develop properly. If the first few years of its life are spent under unhappy conditions its whole life will be tainted. And look what a long time of helpless infancy a child has to go through."

"Now, the life of a bee, from egg to mature worker, only covers a period of five weeks, I believe. Many generations are thus produced during one season, and there is time to experiment largely, I should imagine."

"I grant you, dear madam, that organic heredity is at work from or before the birth of a child, and that many benefits come from a good social inheritance. But our civilisation develops from the accumulated ideals handed down from one generation to another and a good happy home life is essential to mould mind and character. Biologically speaking, the first six years of life are the most important to the human animal. But there are about twenty years during which a human being is plastic to beneficent moral forces and good examples."

"While bees and other social insects exhibit high degrees of organisation these instincts are due entirely to organic inheritance. They are born with certain instincts, and these function owing to definite structures controlled by certain peculiar nerve centres. To given stimuli unvarying responses are given."

"But we note, Mr. Week-End, that it took only forty-four years, or less than two generations in time, to change the old type good-natured German into a ruthless, relentless, bloodthirsty Prussian Hun. We may surely hope to do something to improve our bees which produce at least six generations during one summer season. If the once mild German could be made to kill, torture, loot, ravish and destroy, and to act like a mad beast, we may yet succeed in a few years of better cultural breeding and better environment in raising a vastly improved race of bees."

"That is the line I'd like to take, Mr. Week-End. No doubt thousands of bee-keepers have trodden the same path. We shall look to you to keep us from making too many useless experiments."

"I am greatly in sympathy with your ideals, dear madam. Most biological experimenters crash because funds are lacking. It is easy enough for a man with an assured life salary to make a fine gesture and to talk airily of 'science for science's sake,' and other platitudes. But you will notice that once the assured one has secured a safe living, he generally goes to sleep on his job, while waiting for his pension."

"Now and then a real student appears whom it would be worth while to endow with a sufficient life income to enable him to devote his time to the work he alone could and would do. As Huxley said forty-odd years ago, £100,000 would be dirt-cheap to devote to the development of a Watt, a Davy or a Faraday. But it is hopeless to expect anything from the present self-seeking gang in politics. No so-called statesman since 1906 has given such matters a thought. The sale of honours is so much more directly profitable. Ignorance in high places is at a premium. Luckily, there are signs of revolt."

"Confound your politics, Week-End! The Huns developed their aggressive politics by supplying unlimited funds to make a cult of zoological theories. By studying how to destroy their neighbours by the quickest and deadliest methods they hoped to take over their lands and possessions for the benefit of the German race. They did this——"

"My dear, we are talking about bees, and you, too, will keep to that subject, if you please. Mr. Week-End. We know that the

study of heredity is one of the greatest fields open to investigation, and about the only road by which a real advance is to be made. We also know that it is most difficult to breed domestic races true to type, and we cannot control with bees the mating of drone and queen. If 'Nature' fails, how is man to succeed?

"I once inquired of a well-known breeder of racehorses, Week-End, just what percentage of those carefully selected types came true. He told me only about four per cent.; and he put this down to environment. The food, shelter, exercise, etc., are all so markedly different, for the domestic as compared to the wild animal, that his conclusion was that these agents have such a powerful influence that the vigour is affected."

"Would this factor influence insects as powerfully as it influences the higher animals, Mr. Week-End?"

"I don't pretend to say. The shortness of time in human efforts compared to the ages in 'Nature' militates against laying down any law. In our best domestic, pure-blood stock farms the breeding of any strain over a period of fifty or sixty years is the exception under identical conditions of climate and food. And with these exceptional breeders nothing like one hundred per cent. comes true to type. Yet in 'Nature,' types are fixed. Our artificially isolated stocks either become in-bred, lose their vigour and die out from disease, or if an outcross is brought in to renew the vigour, the sequence is broken."

"But if characters may be eliminated or strengthened by environment if brought to bear early enough in bee-culture, I am all in favour of Mrs. D.B.'s proposition, and anxious to put it in practice. If failings are due to surroundings, let us know this as soon as we can. The apiarist who puts this into use will have the finest bee stocks yet known at a very reasonable cost of production."

(*To be continued.*)

The Return from the Moors.

A good many bee-keepers in this district are anxious to know how we finished up on the moors. We had got our bees there when another bee-keeper landed with an improvised heather hive, from which he was expecting great things. Certainly it looked very imposing—red with white stripes. Our first journey of inspection we found a lot of dead outside the hive, and the end hive at that (Mr. Wilson, please note), for would those bees have any others in? No, so it took them all their time guarding the entrance, and every day there was a pitched battle. That hive went to the moors on ten combs packed with bees and young Bozzalla queen. It has come back here with *three* combs bees. My husband says there are 20 lbs. of heather honey in the brood-chamber; all I can say, no one has seen it.

We had a hurried summons one morning, would we go and fasten up the bees? The farmer wanted to mow his oats, and the bees would not let him. A four miles' journey up hill to fasten up bees is no joke, then another journey to let them loose. Our friend has taken 4½ lbs. of heather honey. The red hive super was filled once with honey. I saw it, but alas! it vanished. He went on his motor-cycle with side-car to fetch his hive back, taking a friend. The friend carrying the hive across the field dropped it, and pandemonium reigned. Mr. Tate, secretary, Chesterfield Bee-keepers' Association, was asked to fetch our bees back; he wanted to have a hand in, seeing he had not taken his bees to the moors. One evening he came here very excited, with a motor-lorry, asked for two veils, hammer, screw-driver and nails.

One hive came undone with the jolting, but the bees only did some fanning on the alighting board. I think they knew they were coming home. The bee-keeper is ever optimistic, so we are looking forward to some good times next year.—(Mrs.) L. Bennett, 42, Walton Road, Chesterfield.

Jottings from Ashdown Forest.

After securing my abode by auction last May, and the negotiations now being completed, I send the promised extract from an article in the *Sussex County Herald*, of July 9, 1921, by the Rev. A. A. Evans. At the time I promised to send it I had not made the acquaintance of Rev. A. A. Evans, the interview being with my son, I not being at home. Since then I have had another call from him, and his pleasant consent to the extract. Needless to say, I did not show it to my late landlord, neither will my cottage be likely to be on the market in the immediate future, if I can help it, though I must admit the past season has placed me in rather a tight corner, having to feed so much instead of bees helping developments. The following is the extract:—

"Early this summer I visited a charming little cottage in Sussex given over entirely to bee-keeping. Father and son—the name is Latimer, or if not just that, well, something a-twin—dwell and work together as bee-masters. The cottage and its surroundings approach my ideal of a bee-home. Perched high above a deep winding lane, which is fringed with jutting rocks of brown sandstone, and with a background of orchard trees, it stands mellow bricked, old-timbered and tile chased, and with lichen and rose-leek, a house of deep peace and quiet toil. Hives were there in long serried ranks, scores of them, all home-made, and so were all the many appurtenances of the hives, the bar frames, comb foundation, all neatly turned out, in a cosy little workshop abutting the cottage, during the winter months. But what brought to my mind this scene of a bee-home, and bee-masters, while writing these notes, was its point of topography. It was the very place in all Sussex (it seemed to me) for a bee-master to dwell. On one side were rich gardens and arable lands, with meandering streamlets, and here from spring to July would be a long, rich source of bee-food, willows, fruit trees, sainfoin, clover and

limes. And on the other side of the cottage, from its very edge rose the sweep of Ashdown Forest, with its mile upon mile of heather. As soon as the lime trees closed, the other harvest would flow into the hives, the rich, brown nectar of the ling. God still walks in a garden; at least, I believe that every garden which shelters sweet natural things, flowers, birds and bees, with their native gipsy freshness, has a link with that of paradise."

The approaching parliamentary election is likely to be an absorbing time generally. Everybody, or section of people, will be trying to get some reform or other aired, generally endeavouring to satisfy their longings at somebody else's discomfiture or expense. Agricultural people will be bringing claim to a lot of consideration, and I think bee-keeping people might just as well go in with questions and worries for the candidates. For the general benefit of growers it is necessary for bees to be kept somehow. All old bee-keepers know lavish expenditure is not very likely to be got back. The cost of materials of all kinds is ve y dear, sugar far beyond what it was in the early part of this century. The price of what little honey we have secured has not dropped, as it probably would had this been a good year. We might apparently reasonably ask if candidates would go in for a removal of all tax on sugar needed for bees. Bee appliance manufacturers would want "protection" on their industries, and be able to charge us more. Honey producers want protection for their honey (often very little), the consumers would have to pay more. With every necessity being so dear, how can the cost be brought down without somebody and everybody lowering together, and they never will; but that great law that needs no M.P.s or officials (the law of supply and demand) will level up matters, each individual faring as best they can, with no M.P. or Government to grumble at. Another law follows very close, the survival of the fittest. So, why should bee-keepers worry about getting sugar cheaper than other people; but we do want more goodwill and fellowship. — A. J. Ridley, Sussex, November 6, 1922.

North Cheshire Chat.

Late autumn is here, but not so much coloured as in Huntingdonshire. Hereabouts the gorgeous tints usually associated with the season are largely missing. The Lancashire smoke seems to affect the foliage so that it all turns to a uniform brown, relieved only by the reds of the haws and holly-berries, of which there are a great profusion, betokening, the wise-acres tell us, a hard winter, which is usually good for our bees, if we have them snug and with sufficient stores close to the cluster. A period of complete rest from now till the beginning of February, with an occasional opportunity for a cleansing flight, may be considered as ideal. From that time until the fruit trees blossom is the critical time when many colonies short of stores go under. Feeding heavily has been the rule this autumn, and supplementing syrup with candy later.

I note Mr. Ridley in "B.B.J.," November 2, gives his bees loaf sugar instead of candy. I would have thought that the coarse crystals of loaf sugar would be wasted by the bees throwing them out of the hive, as they do in badly made candy. I have never tried this method of feeding. If it answers it is cheaper than the candy method. I remember seeing the old skeppists, in my boyhood days, feeding with raw, moist sugar in long, narrow troughs inserted through the entrance. Obviously the bees would only take this on very mild days when they could leave the cluster, and the quantity given at once was so small that I doubt if any good resulted.

Re Mr. Ellis's notes on Isle-of-Wight disease. Is it not time we began to make a distinction between the various diseases which cause crawling and similar symptoms, and which are all referred to as Isle of Wight? Naturally bees affected by Acarine disease would not yield to quite the same treatment, as if affected by Nosema disease, or what the Germans call *Maikrankheit*. All these cause similar symptoms, but are caused by different germs, or parasites, and I believe without a microscope it is hardly possible to distinguish between them.

One thing is certain, in Acarine disease, when crawling commences, the *last stage of the disease is reached*, and a cure by re-queening depends on the percentage of unaffected bees in the diseased stock being sufficient to look after the progeny of the new queen until the breeding of bees goes on faster than the breeding of the mites. According to one authority on this subject, Acarine disease is essentially a disease of bad bee-keeping, and can be kept at bay absolutely by the means adopted by Mr. Ellis, using only the most prolific queens and stimulating them to lay to their fullest capacity in the autumn. With regard to his analogy of influenza taking more virulent forms in different individuals, and attributing this solely to the different resistance of said individuals, I was led to understand during my training in the R.A.M.C. that disease germs varied themselves much in virulence.

With regard to my kinsman's inquiry as to what has become of the field-fares and starlings, he has only to "bide a wee." They have been in this country in their thousands this month past.

D. J. Hemmens.

Appleton, Warrington

Honey Imports.

The registered value of honey imported into the United Kingdom during the month of October, 1922, was £14,426.—From a return furnished by the Statistical Office, H.M. Customs.

Reports on Hubam Seed, November, 1922.

Early in the year we supplied Hubam seed to a number of bee-keepers, and it occurred to us that it might be of value to collect reports as to the results. We therefore sent out inquiries, and have pleasure in giving a summary of the replies.

The reports are about 50 in number, and are from various parts of England, together with a few from Scotland and Ireland and one each from Portugal and France. In summarising them we have tried to get as fair a generalisation as possible, and in some respects have naturally placed greater value on the results from seed sown on a commercial scale. As regards seed, we obtained guaranteed seed from the Root Co. as the best means of ensuring reliability. Our reports also cover a few cases where seed was purchased from other sources.

In considering the results it should be borne in mind that the season has been an exceptionally unfavourable one. During May the weather was dry, thus delaying growth, and from June onwards it was wet and cold, so that very little honey was produced by any of the clover family. It is therefore not surprising to find that in very few cases did the flowers yield any appreciable quantity of honey. In the South-West of France, however, where the weather conditions were more favourable, a crop was grown which produced honey well throughout the season, and from which 100 lb. of seed were harvested (ten times the quantity sown).

The questions sent out covered a number of points which we will take in order:

Length of Germination.—The average time from the date of sowing the seed to the first appearance of plants above the soil was about 14 days.

The Period of Growth, from the date of sowing the seed to the first appearance of flowers, averaged about 3½ months, and we should judge that the average height at this stage was about 3 feet. The period of growth is an important point, as on it depends the height of the crop and the quantity of flowers produced. As the plants increase in size the number of heads (racemes) of flowers increases until a plant 7 feet high may have as many as 700 heads, each head containing ten or a dozen flowers. Where the growth was quick the plants, having a longer flowering season, yielded better results. Thus plants showing their first flowers within two months reached an average height of 6 feet, those taking three months reached 5 feet, those taking four months 3 feet, while the few cases which took longer than four months were as a general rule unsuccessful.

How Worked by Bees.—In most cases the plants were not in blossom to a sufficient extent to produce honey till too late in the season, but the majority of the reports speak of such flowers as there were being worked by bees when the weather permitted. As will be expected, March sowings yielded better results than April ones, and seed sown in April better results than seed sown in May.

A Good Growth of Hubam Clover.

Effect of External Conditions.—We classified the results according to the nature of the soil, and found that where lime was present (or had been applied) slightly better results were obtained than from soils without lime. We next considered the results in relation to the altitude, but do not think we had sufficient variation to enable us to form an opinion. It is perhaps significant that the one outstandingly good result was obtained at an altitude of 1,000 ft. Arrangement of the results geographically again show no striking variations within the British Isles. We noticed certain broad differences, but do not consider we have sufficient evidence to enable us to commit ourselves. The French result has already been mentioned. A small quantity of seed sown in Portugal (also at 1,000 ft. altitude) also grew well.

Suitability as a Farm Crop.—Several of those who sowed the seed on a commercial scale were impressed by the potential value of the plant as a fodder crop. However, in one report the criticism was made that to be suitable as a food the crop would have to be cut before it had sufficient flowers to be of any value for honey.

General Conclusions.—Hubam is a series of the genus Melilotus and of the varieties previously known. Bentham and Hooker say that they are less common in the British Isles than in Southern Europe. That is to say that other members of the same genus as Hubam grow better in a warmer climate, and in our judgment the main question is as to whether the English climate is ordinarily hot enough to make Hubam successful as a farm crop. However, in this year, which has been an exceptionally unfavourable one, the results have been moderately good, and no one who has seen the mass of flowers produced can doubt that under favourable conditions it is of exceptional value as a honey plant. It is obviously important that the seed should be sown early.

In conclusion, we should like to thank those who have supplied us with the information which has made this report possible. Should there be any points on which your readers would like further information we shall be glad to supply it. Burtt & Son.

Gloucester.

International Standardisation.

On Saturday, December 2, the Apis Club will be convening an important conference of bee-keepers, appliance manufacturers, and representatives of associations to be held at the Conference Room, "Bonnington Hotel," Southampton Row, London, W.C., at 2.30 p.m. The place of the meeting, being in the heart of London, is easily accessible by omnibus or by tube. Both the Holborn and Russell Square Tube Stations are only a few minutes' walk from the hotel.

The object of the conference is two fold: (1) To urge the strict standardisation of leading British hives which are in common use and to curtail the multiplication of types, and (2) to suggest the adoption of Langstroth equipment as an international standard. These two objects are not in reality incompatible, although differences of opinion exist as to their respective merits.

The managing director of the Club will be entrusted with expounding its policy and inviting discussions. The conference is sure to prove of interest and education, and a powerful driving force for the standardisation movement whether national or international. It is up to those who appreciate the significance of this question to attend in person, if possible, or to send delegates. All interested bee-keepers are welcome to be present.

The conference is expected to last till 5 p.m., when tea will be provided to those who desire it at a charge of 1s. 3d. per member, payable to the hotel management.

A. Z. Abushady.

British Bee-Keepers' Association.

The monthly meeting of the Council was held at 23 Bedford Street, Strand, London, W.C.2, on Thursday, November 16, 1922.

Mr. W. F. Reid presided, and there were also present: Mrs. M. K. Hodson, Misses M. D. Sillar and M. Whyte-Johnstone, Sir Ernest Spencer, Messrs. J. B. Lamb, W. H. Simms, G. Bryden, F. W. Watts, J. Herrod Hempsall. Association representatives: Mrs. Llewellen Morgan (Monmouth), Messrs. R. R. Babbage (Middlesex), E. J. Waldock (Surrey), and C. M. J. Winn (Essex).

The minutes of the previous meeting were read and confirmed.

Letters of regret at inability to attend were read from Messrs. C. L. M. Eales, E. Semper, A. Richards, G. R. Alder, and the Rev. E. F. Hemming.

The following new members were elected: Mrs. K. E. Rogers, Messrs. J. B. Leighton, and H. Rennell.

The Bedfordshire Association applied for affiliation and were accepted.

The report of the Finance Committee was presented by Mr. Bryden, who stated that the receipts for October were £51 15s. Payments amounting to £51 1s. 6d. were recommended. The balance in hand on November 1 was £63 19s. 9d.

It was resolved that the insurance scheme should be continued on the same lines as hitherto.

The report of the Exhibitions Committee was received and accepted.

Mr. Babbage proposed, Mr. Winn seconded, and it was carried: "That the dates for the Final Examination be changed from May to the last Friday and Saturday in March."

A long discussion on "The Standardisation of Hives" took place, and it was resolved to appoint the following as a sub-committee to go into the matter and report:—

Miss Sillar, Messrs. G. Bryden, J. B. Lamb, E. J. Waldock, A. Richards, J. Price, and J. Herrod Hempsall. Mr. Cowan to be communicated with when something definite is evolved.

It was resolved to ask Col. Kettlewell to deal with the Boy Scout Association.

Next meeting of Council, December 21, at 23 Bedford Street, Strand, London, W.C.2.

Beverley and District Beekeepers' Association.

The annual honey show of this association was held on November 16, in connection with the Beverley and District Chrysanthemum Society's Exhibition. The exhibits, which were judged by Mr. F. Boyes, were very good in quality though fewer in number. Such shows are undoubtedly beneficial to visiting bee-keepers and to bee-keeping as an industry, and I think committees should find ways of drawing more exhibits and of reducing the expenses and troubles of exhibitors. Some ideas occur to me in this connection. We might send out exhibit numbers to each applicant for a schedule.

and to each member of one's own association likely to show. In many cases I think entry notifications could be cancelled. The bench space in our classes is very elastic, and any surplus space can be filled up advantageously with a sales display. Also, in many cases, entry fees can be abolished and a percentage deducted from the prize money. And if the "get-up" of exhibits could be simplified and standardised it would lead to more showing.

The prizes awarded were as follows:—Extracted (open): Mr. H. Chapman, Beverley, and Mrs. G. Scott, Brandesburton. Mead (open): Mrs. Scott. Gift class (14 entries for 30s. prizes): Light, Mr. A Wilmott, Higham Ferrers; dark, Mr. A. Berrisford, Heath Hayes, Cannock. Sections (restricted): Mrs. G. Scott and Mr. Chapman. Extracted (restricted): Mr. Chapman and Mrs. Scott. Wax: Mrs. Scott.

T. T. TAYLOR, Hon. Sec.

Honey Not Granulating.

[10717] *Re* honey not granulating (10702), October 12, and several others, debating the same question. I extracted a super in May, 1921, of early clover honey (alsike and trifolium), strained and bottled it. It has never been heated or tampered with in any way, and kept in a glass cupboard. It is pale lemon colour and good density, but there is no sign of granulation after 17 months, and I have 16 lbs. of it now. None of it came from the bag Mr. Pearman hints at in the sample someone sent him. Charlock, etc., honey with me last year was very light, and very stiff. I was extracting a lot of it in November and no sign of granulation, but I had to rig up a heating apparatus for the combs before extracting.—C. CAMERY, Itchington, Alveston, Bristol, October 16, 1922.

English and Foreign Honey in Shop Windows.

[10718] May I ask a small space to reply to a letter under the heading, "Echoes from Cornwall," THE BRITISH BEE JOURNAL, November 9, p. 547, in which are remarks upon a display of honey in a shop window? I am interested in reading this letter from Mr. Bennett. My experience of the season has been disappointing, too. I have had no sections filled—only one started, but no honey collected and stored in it—and I have only managed to get twelve sections from a friend at St. Austell. I have not been able to procure enough English honey to satisfy my customers. I would remind Mr. Bennett that although I do not label imported honey, no one who enters my shop has foreign honey palmed off on to them for English, and they know what they get.

The bee exhibits were produced by Mr. T. Bonner Chambers (who has kept bees for over forty years), the expert who is well known over Europe and in the American bee world. I have never seen more clever and perfect production for educational purposes that these, showing the stages in the life and work of the honey bee from the beginning to its full developed state. I wonder those who call themselves experts don't get more done in shop-window displays showing the stages of production of our food, etc. The glass of honey on the bed of heather he speaks of was not put there to mislead people—but most people know that clover and other flowers will not last fresh without water, as does heather. The bumble bees were placed on the bottles to catch the eye and attract the public as they passed by—the main object of all shop-window displays—not to make people think the bumble bee collects the honey for us. Everyone knows that even a poor bumble will, if it has a chance, run over a bottle of honey in the hope of a taste of its contents.

Mr. Best, of St. Austell, and Super. Crocker, of Camborne, will be able to satisfy Mr. Bennett as to whether I am one to sell an article under a misrepresentation. I am glad to have seen the letter and to "put the hat on."

CHARLES F. WILLMORE.

Falmouth.

Stores Not Sealed.

[10719] Referring to your note in issue of October 12, with regard to the bees not sealing their stores this year, I opened one of my hives to-day and found the combs almost solid with stores, *but not an inch of it sealed over*. I can only assume that the temperature in the hive has been insufficient to evaporate the surplus moisture and reduce the stores to the necessary density for sealing. Now the important question is what will be the result if these stores are not sealed before the really cold weather comes. Will they keep and remain good, or set up dysentery later on? As I have been feeding syrup medicated with "Bacterol" for some time, I presume these stores consist of this and not of natural nectar.—A. ABSELL, October 15, 1922.

Degeneration of Bees.

[10720] Whilst heartily agreeing with your correspondent "Vitæ" that "good ripe honey" is the best food for bees, it seems to me that his argument deducted from rats to bees is very much strained. Their habits, food and bodily structure vary so very considerably. "Vitæ" quotes Professor Hopkins' experiment of feeding rats on lard which resulted in loss of weight, and caused disease symptoms, but immediately on milk being added to their diet they began to gain weight (which was to be expected, for we all know that their first cousins, mice, will dip their tails into milk pans to obtain it!) He thinks the "unknown substance" called vitamins was responsible for the increased weight, and proposes, if he has occasion to feed his bees on syrup, to add

the juice of carrots (why not milk, if anything?) because they are assumed to contain vitamins. Now, Dr. Walter Elliott, the Parliamentary representative of the Research (Vivisection) Defence Society, who, a year or two ago, spoke in the House with unbounded enthusiasm of the research on dogs connected with vitamins, has recently quite changed his opinion. Writing to the *Manchester Guardian*, July 26, he says :—

"Vitamins are the latest fashion in medicine. The Harley Street specialist is as much subject to the latest fashions as any Parisian dressmaker, and doctors have attributed an altogether ridiculous importance to these substances. In particular the so-called antirachitic Vitamin A has shown a fatal fascination for all those whose minds turn naturally towards a demonological conception of the art of healing. In this respect the Medical Research Council is by no means guiltless. The inevitable desire of a Government department to produce at any cost results which can be stated in an attractive manner in an annual report has led them into more than one cul-de-sac.

"These substances, the 'accessory food factors,' received the name of 'vitamins,' and it is around their constitution and, indeed, their actual existence, that controversy is acute to-day.

"It must first be said that the existence of any actual substance corresponding to the name is a matter of pure theory.

"Nobody has at any time isolated any such concrete chemical substance. Nevertheless, from the researches carried out by Hopkins, Mellanby, Chick, and others in this country, and a host of workers in America whom we may exemplify by McCollum, it has been decided to assume the existence of three of these substances, called respectively Vitamin A, Vitamin B, and Vitamin C."

You will notice the word "assume"!

Would not carrot juice be likely to cause dysentery in bees?

Dr. Bernard Hollander (Harley Street specialist) says that "It is dangerous to draw conclusions from animals—generalisations from animals to humans have more than once in the scientific world led people astray." Which corroborates what we are told in 1 Cor. xv., 29. "All flesh is not the same flesh, but there is one kind of flesh of men, another of beasts—fishes—birds, etc." On Friday, at a meeting at Burlington House, Professor Lessing described two sets of experiments to separate coal, one where "the result was somewhat inconclusive, and the other where the results were not yet available." Colonel Blacket depreciated scientific men bringing "immature" conclusions before them. "We want the facts, not the fancies," he said.

This seems so aptly applicable to vitamins, especially in their supposed connection to bees, that I trust you will find room for this letter.

A. PARKER (Miss), Local Hon. Sec.,
British Union Anti Vivisection Society.
"Leigh," Finchley.
November 19, 1922.

Notices to Correspondents

D. G. A. (Norwich). *Flowers for bees.* The most you can do in a 40-pole garden is to grow plants or trees that will provide a little nectar and pollen for the bees in the early spring. It is labour in vain to attempt to grow plants as a source of surplus in so small an area. A few plants of Christmas rose will provide the earliest source of nectar. The bees will work on these on warm days in January if there are any. Fruit trees are also useful, gooseberries and currants being the earliest, followed by cherry, plum, pear and apple. Winter Aconite is also a useful early flower. Others are Arabis, Crocus, Snowdrop, Narcissus, Wallflower, Aubretia, Limnanthes Douglasii; in fact, almost any early spring flower is useful. Single varieties should be grown, as double flowers are not so much good to the bees. During the summer when clover, sainfoin, limes, or heather are in bloom the garden flowers will be neglected, but after these are over autumn flowers in the garden will be welcomed. One of the best is the Michaelmas Daisy. Sweet clover will also bloom until the frosts kill it off.

W. W. R. (N. Wales). *Split cane for skep making.* We are greatly obliged to several correspondents for sending addresses where this can be obtained. Of these Messrs. F. Westbury & Son, 183, Great Dover Street, London, S.E.1, appears to be the best. They are wholesale importers of this class of goods, and will either supply the cane, or give the address of the nearest retailer. Mr. E. Litman, Basket Maker, South Street, Castle Cary, will either supply or put our correspondent in touch with someone who will supply any quantity.

A. C. (Torquay). (1) Bees will sometimes store pollen in drone cells, but so far as our observation goes will not do so as a rule. (2) If a colony has a laying worker it will not, as a rule, accept a queen.

(3) *Definition of a swarm.* The first or prime swarm is usually known simply as a swarm, whether accompanied by the old queen, or if she has previously been deposed, a young queen, or even a virgin. Second and subsequent swarms are "casts," but a "cast" will always have one or more virgins, or a *young* mated queen. A colony will never send out "a small cast *before* the main swarm," as the beekeeper stated. The first lot of bees, few or many, to leave the hive with a queen is a swarm. (4) The queen cell had been used for breeding, as shown by the remains of the cocoon inside.

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WANTED for the Continent, a Queen Breeder, methodical and capable of working to schedule time in producing queens in quantity; single person of either sex.—Apply, giving references, to Box 83, BRITISH BEE JOURNAL, 23, Bedford Street, Strand, W.C.2. k.2

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BEE EXPERT would like to rent small Mixed Holding, up to 10 acres, in good honey district, suitable fruit, fowls, bees, etc.—Information to Box No. 96, B.B.J. Office, 23, Bedford Street, Strand, W.C.2, will be appreciated. r.k.70

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GLASS TOP BOXES (1 or 2 lb.) ... ... 4 lb., **5/-**; 7 lb., **8/3**; 10 lb., **11/6**; Post Free
PLAIN TOP BOXES do. ... ... 4 lb. **4/9**; 7 lb., **7/6**; 10 lb., **10/-**; do. do.

C. T. OVERTON & SONS, CRAWLEY, SUSSEX.

PURE CLOVER HONEY in 7-lb. tins, an Ideal Xmas Gift.—PEARSON & GALE, Marlborough.

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By C. H. HOOPER, F.R.H.S.

Now is the time to select the varieties of Fruit Trees you intend planting. An expenditure of 7d. now will be pounds into your pocket in the future. Get a copy of "POLLINATION OF FRUIT IN RELATION to COMMERCIAL FRUIT GROWING," by C. H. Hooper, F.R.H.S. 7d. post free from the British Bee Journal.

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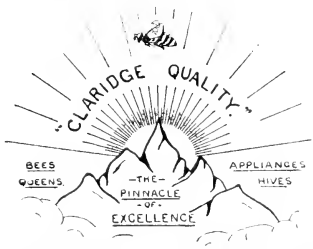

F. M. CLARIDGE, Copford Apiary, Colchester.

Advertisement Rates.

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	£	s.	d.
Full page	4	10	0
Half page	2	16	0
One-third page	2	0	0
Quarter page	1	15	0
1½ in. across page	1	10	0
1 in. across page...	1	0	0
½ in. across page...	0	12	0
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Discount for a series of consecutive displayed advertisements:—Six insertions, 2½ per cent.; Twelve insertions, 5 per cent.; Twenty-six, 15 per cent.; Fifty-two, 30 per cent.

The "B.B.J." Ideal Candy-Making Thermometer.

This thermometer has been specially designed for making candy for bee food. In place of the usual scale progressing by two degrees, there are only two marks on the scale. The top mark shows the temperature to which the candy should be boiled. The bottom one when it is cool enough to commence stirring.

These are both engraved *on the glass* and are *accurate*. There are no calculations to be made as on the ordinary sugar boiler's

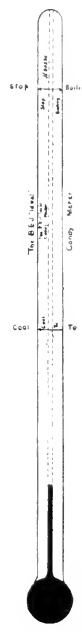

FIG. 1.

FIG. 2.

thermometer with a full scale of degrees, which are not always accurate. A recipe for candy and full directions are sent out with each instrument. Any other candy recipe may be used. The thermometers can only be obtained from this office. As they are being sold at cost price it is not possible to supply appliance dealers.

Fig. 1, plain glass tube, price 4s.

Fig. 2.—Thermometer in brass case, 5s., packed in a neat cardboard case, postage 3d. We recommend the brass frames, as the tube being protected, it is not so likely to be broken. The frame is also plain, neat and easily cleaned.

"British Bee Journal" Office,

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For best bees, queens and appliances come to PEARSON & GALE, Marlborough.

ESTABLISHED 1870.

Premier Quality—Got rid of all others.

"In the year 1920 I purchased one of your 'White Star' Nuclei, and although, as you know, the season was very bad, I did exceedingly well with your bees, and I am ordering a further supply, *having got rid of all others.*"—C. W.

[Later] "I received the bees well packed and in good condition, only five dead bees in the lot. I can assure you I am well satisfied." Stairfoot, Barnsley, 1922.—C. W.

The only Pedigree strain bred by intense selection of both queen and drone breeding mothers for more than 30 years. 20-page Annual and Reduced Price List for 1923, free.

S. Simmins, Queenland, Heathfield, Sussex.

BEE CANDY.

Made from Pure Cane Sugar, and guaranteed free from Glucose. Prices:—

1 lb. at 1/-, post 9d. 4 lbs. 5/-, post free.
7 lbs. 8/- post free. 10 lbs. 11/- post free.

Special prices for large quantities on application. SYRUP in 7 lb., 14 lb. and 28 lb. tins.
Use the WORMIT Combined Feeding Board and Winter Cover, as advertised in issue of 24th August.
FEEDERS of every description. Full particulars in Illustrated Catalogue sent post free on application.

Dadant's New Patent Wired Foundation.

Supplied in the sheet, with wires embedded all ready for use.

SAVES TIME. SAVES LABOUR. SAVES MONEY.

Price only a little more than that of ordinary foundation.

Prevents sagging and gives a perfect comb.

Has been tested and proved for several years in hundreds of colonies.

Send for a sample pound and judge for yourself.

We are also making special frames to suit this foundation, but old frames, if in stock, can be adapted by the use of a special bottom bar.

R. STEELE & BRODIE,

Bee Appliance Works, WORMIT, SCOTLAND.

"MEMPHIS L"—A CERTAIN CURE FOR I.O.W. DISEASE.

(ALSO CRAWLING, BEE PARALYSIS, AND DYSENTERY).

Have you ever seen your bees come out of the hive, and one after the other fall over the edge of the alighting board to die? Have you ever seen those ghastly little brown patches? Now, open up the hive. Not a bee can rise to challenge you

"MEMPHIS L" has been definitely tested and PROVED, and will permanently cure your poor little friends so gallantly trying to carry on for you. "MEMPHIS L" is neither disinfectant nor drug, but a natural remedy, and no trouble to apply. We have such confidence in "MEMPHIS L" that if stock is not COMPLETELY cured to your own satisfaction we return cash in full. State how far disease has gone and any particulars of affected stock. If queen is over 2 years old we do not guarantee cure.

This Advertisement will not appear again—please make a note of it.

Keep "MEMPHIS L" on hand in case of emergency. Price, with full instructions, **3 9** *per pot (sufficient for 1 stock) sent by return of post.*

THE THAMES VALLEY BEES (Regd.) TEDDINGTON.

The Bee-Keepers' Calendar.

NOVEMBER.

30 Thursday. "The golden-girdled bees made feast as over the lotus the soft sun spread."—*Noyes, "Orpheus and Eurydice."*

DECEMBER, 1922.

1 Friday. "As for Rosemarine, I let it runne all over my garden walls-not onlie because my bees love it; but because it the herb sacred to remembrance and therefore to friendship; whence a sprig of it hath dumb language."
Sir Thomas More.

2 Saturday. " . . . . Her girlhood's memories,
The huskings and the apple-bees."—*Whittier, "Snow-bound."*

3 Sunday. "A world of blossoms for the bee,
Flowers for the sick girl's silent room,
For the glad infant sprigs of bloom,
We planted with the apple-tree."
W. C. Bryant, "The Planting of the Apple-Tree."

4 Monday. "Oh! call my brother back to me!
I cannot play alone;
The summer comes with flower and bee—
Where is my brother gone?"
Mrs. Hemans, "My First Grief."

5 Tuesday. "Queen good,
Plenty brood,
Strong stocks,
No knocks,
Falling clover,
Season over,
Sell honey,
Pocket money,
Winter store,
Galore,
Roofs dry,
Go bee-bye."—*J. Smallwood, "Potted Bee-keeping."*
(*B.B.J.*, 23. xi., '16).

6 Wednesday. "I will arise and go now
And go to Innisfree!
And a small cabin build there,
Of clay and wattles made:
Nine bean rows will I have there
A hive for the honey bee,
And live alone in the bee-lov'd glade!"
W. B. Yeats, "The Lake Isle of Innisfree."

Articles on Bee-Keeping.

Following on our remarks last week, we give a short article that appeared in the *Aberdeen Free Press* of September 5.:

ISLE OF WIGHT DISEASE AND ITS CURE.

(From W. H. Riddoch, Keith.)

For the past few years I have been demonstrating my abilities on the causes and cure of "Isle of Wight" disease. The following are some of my experiments in regard to the matter. "Isle of Wight" disease is a deadly germ, which had been a mystery to all bee-keepers, and which I have studied with care for the purpose of throwing more light on the subject. This disease is a germ which attacks the bee, and finds its way into the anthorox of the bee, and results in the bee becoming dormant, and unable to fly, and finally killing the bee.

When affected they crawl from the hive on to the ground, and form clusters, with the idea (my experience) that they can help each other, but fail to do so. I have extracted the germ (with a method of my own) from the bee, but no sooner had this been done when the bee was once again attacked. After studying the method of extracting the germ, I further investigated how some hives (all placed together) escaped from the plague, and others were affected.

After careful study, I came to the conclusion that this was the result of the Italian queen being introduced to the British stock, which caused the stocks to be cross-bred, with the result that the first cross was successful, but the later crosses became weak.

The wing of the British bee is much stronger and heavier than that of the Italian bee, and therefore the wings of the third cross became a labour to the bee in its flight, causing inflammation in the socket of the wing, which irritates the bee, and makes it unable to fly freely. After the inflammation in the bee has occurred, it becomes putrid in the socket, and then makes headway to the anthorox of the bee. This germ which causes the disease is named "Isle of Wight" disease. Any interested in any results can have further information from me.

We have read many articles on "Isle of Wight" disease, and the epidemic has been attributed to a number of causes. The writer of this has at least given us an entirely original one. The whole article is one of the best examples of how not to write for the Press that we have read for some time. The writer, we have no doubt, is sincere, and anxious to help his fellow craftsmen, but instead of demonstrating his abilities "on the causes and cure of 'Isle of Wight' disease," has succeeded in demonstrating his inability to give sound instruction and advice. One wonders how he "extracted the germ." The phrase reminds one of the dentist's. The last paragraph, however, is the gem of the whole article, and to anyone who knows anything of bees and their diseases is most amusing. It is, however, not quite clear why the first cross should not be affected, or what becomes "putrid in the socket, and then makes headway to the anthorox," the inflammation, the "germ" or the bee. The pity of it is that people who know nothing of bees may read the article, and looking on the writer as some authority on bee-keeping think that such stuff is good bee gospel.

A Dorset Yarn.

This week bees have been on the wing very freely. Either my lot is robbing out the Parson's or his lot are robbing mine; there are quite a lot of them travelling backwards and forwards across the fields. Even though the frost is severe at night, the warm sun tempts them out about noon. Why bees should do this so much is beyond my comprehension; it is not lack of stores. A near neighbour told me how one strong lot started on a weak lot of goldens; he reversed the two hives, then the weak lot entirely cleaned out the strong lot, though only a small space could be used to get in and out; but so persistent are they when they start this business that nothing seems to prevent them. I notice a fine spray of cold water acts as a deterrent, but cannot think it can do the bees any good to be wetted in the late months of the year.

A friend in Wimborne told me on the 25th that one of his had been cleared out in a few days. He had been out to see some beekeepers who lived in the area of pine trees and heather. These were very short of stores; robbing was in full swing even in that district. He did not consider it a good area for bees at all, but weak stocks are sure to get robbed out unless the entrance is entirely closed up for a day or two while the robber song is on, as it seems to affect all the hives. They all seem eager to take part in the plunder.

I have read somewhere of "a black bee which is called a thief." After all, it is their nature to get all the stores they can for themselves, like so many humans in the world, not caring who goes under as long as they have plenty. One writer says: "The propensity to rob is acquired only when there is a dearth of honey in the flowers." This may be so; but why, then, do they start in spring robbing out the weaker stocks when spring flowers are plentiful? In Dadant's book it states "the clouds of robbers need never be mistaken for honest labourers; their unwieldy flight shows them carrying heavy burdens from the hive. As they enter the hive they are lean and hungry, looking as Pharaoh's lean kine, but when coming out their burly looks make them appear like Aldermen who have dined at

the expense of the city, as they have stuff'd to their utmost capacity." It is said in the same book that in Germany the hive that is being robbed is moved away to another place, an empty one put into its place with crushed wormwood under it; this is so distasteful to the bees that they soon leave the hive altogether. It is said that Italian bees are the worst offenders; that they are also able defenders of their own homes. The Cyprians and Syrians are even better fighters than the Ligurians. Dr. Miller, in his "Forty Years Among the Bees," writes he has fed barrels of sugar in the open air to stop robbing, but he is doubtful if he should do it again.

This last week we have had interested letters from a schoolmaster, a basket-maker, an Irish florist and bee-keeper, from a professional mole-catcher, who is also a bee-keeper in Gloucestershire. His bees have to travel across a tidal river a mile wide to get to the clover fields; this is most interesting, they could not do many journeys each day. I think it is in Root's book that I read that they crossed the Mississippi River where it was a mile wide. Have lent the book to another bee-keeper who wants to read up, so cannot look and make sure. No matter what our business in life may be, bee-keepers are all out to learn more of the craft, all are eager to extend their knowledge. Some ask me if I can help them; can only tell them what we do with some success and tell them to read up in the guide books. "Where the bee sucks there suck I." What nature teaches us, what the books tell us, that we tell others; this is all we can do. "Cast your bread upon the waters, find it after many days." One writer to me gives the date in 1819 that the yarn had stated about the bees and pollination of fruit. It had taken three years for the reader to find out that it was a fact. The Scriptural quotation is about the rice seeds that are sown on the watery flats before the wastes of the water dry up. All writers of bees try to do the same—write of what we have seen and heard. The reader can try the different methods, can see if they work for the good of the hives. With robbing the surest way is to close up entirely for a day or two. If the hive has a free way round the brood box there will be plenty of air, but you must see there are no bad joints where bees can get in. Books also tell of a carbolic cloth hung in front will always be a deterrent to bees inclined to rob.

J. J. Kettle.

Jottings from Huntingdonshire.

Mr. Flashman's recent reference to in-breeding tempts me to offer a few remarks upon the question. I think perhaps I may have been as guilty as anyone in using the term "inbreeding," both in lectures and in written articles, and therefore I seize this opportunity of explaining what I mean by the term. Let me first say a word or two about promiscuous inbreeding. This goes on in nature amongst animals and birds and insects, and doubtless reacts against perfect evolution. Nature, however, provides remedial measures which prevent wholesale degeneration. Those of us who went in for rabbit breeding during the war could not fail to notice that while the progeny of inbred matings were often superior in shape they were vastly inferior in stamina. In the wild state rabbits enfeebled by inbreeding are the easiest prey of owls and foxes, and thus the fittest survive. Now to borrow an illustration from the poultry yard. Poultry fanciers not infrequently inbreed, —or must I say line breed?—to fix points in shape and colour. This results in also fixing tendencies to disease. The poultry keeper, however, selects and culls. Those birds, be they never so true in marking and colour, which reveal an absence of stamina, he ultimately relegates to the fattening pen, selecting only the most vigorous birds for his future breeding pens.

Can this method be applied to bees? Yes and no. We cannot pen bees up by the dozen nor the hundred. It would not be of much help if we could, since the whole colony of bees, which should consist of many thousands, have one mother. Everything then depends on that mother. (1) Whether she is herself the offspring of vigorous mating. (2) Whether she has herself mated with a Class A drone. In the realm of bees it is possible, but very, very improbable, for a virgin queen to go on her mating flight with a drone of her own breeding. While such a thing rarely if ever happens, it is possible and very probable a virgin queen will mate with a drone so nearly related as to both be of one mother. Let us examine this. A bee-keeper aims at producing a perfectly yellow bee. He must first select a place for his apiary which is a few miles from any other bee colonies. He then secures the yellowest queen possible and starts away. If the queen has mated with a yellow drone whose father and mother were yellow the progeny will be chiefly yellow, but he knows—if he is a beekeeper of some experience—that he dare not leave matters to take their course, otherwise the yellow feature will disappear in the descendants of his bees. He must exercise his skill at selection. In other words he will have to eliminate from his apiary all mis-marked drones and be sure his virgins are mated to drones most perfect in colour. This is inbreeding: mating up bees that are not only related but have certain fixed characteristics. This method of inbreeding would undoubtedly produce bees yellow as guineas; but while he is breeding in certain fixed colour characteristics he is also fixing hereditary weaknesses in the matter of stamina, therefore lessening the power of resistance to disease. It is noteworthy that bees so bred will produce wax as white as driven snow—but this is by the way. I might have more to say about this later on. Pre-disposition to disease can be checked by cross-breeding, but cross breeding, even though male and female are strong in colour and of the same breed of bee, will invariably result in one-half of the progeny being

darker in colour than their parents. Moreover, it is well to bear in mind that bees hatched in July will not always be similarly marked to those hatched in September, even though the eggs are deposited by the same queen mother. At another time I will add further remarks on this subject. Referring to my remarks of a fortnight ago, I will do my best for those who have written to me. One correspondent, "Ex-Soldier," would be glad to get hold of some Indian Runner or Khaki Campbell ducks in return for bees. If any reader would come to the rescue I should be happy to put him or her in touch with the ex-soldier in question. Much could be done in this way to the satisfaction of both parties.

E. F. Hemming.

Steeple Gidding.

Week-End Bee-Keeping.

By S. H. Smith, Cambridge.

(*Continued from page* 568.)

When Freda showed me into D. B.'s study at 11 a.m. Saturday, September 2, I found him poring over a list of figures.

"All ready for business, Week-End. I've had to listen to some queer remarks *re* officials. The reason why we don't show more initiative is because we dare not. Originality is strictly taboo. It would jar and upset the tranquillity of those in higher places, you know. We shine only in routine matters. But now and then we get a chance and when we do we take advantage of it. In our little bee deal I've held the stakes and I am going to apportion the rewards."

"Here are the figures of our 1922 expenditures and receipts. As per page 212, "B.B.J.," we invested £18 1s. 6d. We bought additional doodads to the tune of £1 12s., counting the August Italian queen-bee now in No. 3. The passenger train rates on those two bee stocks cost 10s. 9d., and cartages were 2s. 9d. The total is £20 7s., or seven shillings over our estimated budget."

"We sold bees for £7 10s., and we took off thirty-six sections. You say the wholesale price was 18s. per dozen, or £2 14s. in all. The total sales were therefore £10 4s."

"It is true that the D. B. family ate most of the sections. We gave away a few, but that would class as a 'proud gesture,' I suppose. You said, you know, that you would take your share later on, and you are still waiting. But I gather that if we did not get any additional honey dividend we have saved the expense of feeding the bees via the syrup or candy route by leaving the honey on the hives. As you say that 1922 has been the poorest honey season since the '80's, we'll let it go at that."

"Honestly, old man, I can't see much wrong with the percentage of profit, although you say that one can't make bee-keeping pay unless one gets two big dividends per annum. Speaking for the D. B. family, we are perfectly satisfied and willing to put out money indefinitely at this rate."

"Yes, I know you have a credit of sixteen shillings for one set of drawn-out combs. But I'd like to lump that with another matter I'm coming to."

"What about your share in the tortoiseshell-tom-cat money? You'll remember you owe me 7s. 6d. for half the original interest?"

"Good heavens! All right! all right! That settles it. You won't accept one penny. You don't have to use such emphatic language. Mrs D. B. sized you up for an obstinate mule about this matter, or words to that effect. By the by, Week-End, the wife and children are at Bournemouth for a couple of weeks, spending some of that cat-money. Of course the deal came off, and without a hitch. I must tell you I threw in old Satan as part of the bargain. In case of any accident to 'Pious,' Dr. S. C. Apel may be able to effect a combination to result in yet another tortoiseshell tom."

"Now, listen, Week-End, and kindly hear me out without interrupting. Imagine, old son, that those 'adorable eyes' are looking at you, if the voice is mine. We take it you are not in the bee business for your health. You have preached high and low about the advisability of buying bees in the early autumn. You classed this transaction as equal to laying down good wine in the cellar, if I got you rightly. Here we are in the first week in September. You have the bees and we want to buy some; four good stocks in hives and two good skeps 'special' for the wife. Name your price."

There was silence in that room for a minute or two. I could hardly refuse an offer put so graciously without writing myself down as a curmudgeon. Good old D. B. they don't make them much better.

"Very well, old man. I accept the conditions, and we will go down to your apiary this very afternoon and pick out the stocks. Now your half-share in the D. B. apiary profits, £10 4s. is £5 2s., plus 16s. for the drawn-out combs, plus £20 for four bee stocks in double-brood chambers in good hives, plus £4 for two big skeps full of bees and honey. Now, Week-End, our original agreement said buy or sell. We are going to buy. Please don't interrupt or I'll get the figures mixed. Half of £20 7s. is £10 3s. 6d., which, being added to £29 18s. equals £40 1s. 6d. Call it £40 for cash, and here's your cheque."

"Not one word, old son. I can see very well that the bee business is not all honey. The instruction part is only one episode toward the end in view you've had. You have given us of your time, of your vitality and of your sympathy without stint. Allow us to make some little return if only by robbing your apiary of a few more of its best stocks under the guise of a purchase."

D. B. got up and rang the bell. "Bee deals are dry and tedious matters that need a bit of moistening. We will seal this deal with a glass of Manzanilla." By some occult influence Freda had anticipated the

order, as when she answered the ring, she brought a tray furnished with the sherry and glasses.

"After a look at our little apiary, old man, we are going to town to get outside of a little lunch I've already ordered to celebrate this occasion. Then we will visit your apiary and choose the D. B. stocks."

"The wife and I have arranged the programme for next year. We shall own all our bees and appliances, but we shall offer you a half-interest in all bee and honey sales if you will supervise our efforts. We shall need a guide, philosopher and friend for at least another year—there is no getting away from that. You have said it will take at least four seasons for anyone to get *au fait* with bee behaviour and the necessary business moves to deal with the sales of bees and honey. So be it. We shall be happy if you will work with us to our mutual advantage every year. We may yet blossom out as bee farmers—who knows?"

(To be continued.)

The Development of the Apis Club.

A unanimous and appreciative resolution was passed by the annual general meeting of the Governors of the Apis Club (held at Port Hill House, Benson, on November 25), to maintain the services of its founder, Dr. A. Z. Abushâdy, as indicated in THE BEE JOURNAL of November 16. The arrangements decided upon, there is every hope, will facilitate smooth working and satisfactory development, although it will not be possible to accelerate the work of the Club or to largely

DR. A. Z. ABUSHÂDY.

From the painting by M. Hassan at the Apis Club, Benson.

widen its scope in the absence of sufficient funds, which can only be obtained from public-spirited benefactors who are in a position to contribute towards its prosperity. The steady increase in the membership, on the other hand, and the moral support which the Club is receiving from all parts of the world will help to maintain and consolidate its present programme.

In a message of good will received from

Dr. Abushâdy, he asks us to publish his apology to the many friends who have sent him kindly letters of appreciation on seeing the notice of his impending travel from England, for being unable at present to thank them personally for their courtesy. The Standardisation Conference, which will take place at the Bonnington Hotel on Saturday afternoon (December 2), will be incidentally in the nature of a farewell meeting.

Obituary Notice.

MR. G. NEIGHBOUR

It is with regret I have to announce the death of the Expert to the Bucks County Council and Bee-keepers' Association, Mr. G. Neighbour, of High Wycombe. In July of this year, while out on his bicycle visiting the members in the Hambledon district, he had a bad fall. In spite of this he continued work until in the second week of August he was compelled to give up. Serious complications set in, and he took to his bed, passing away on October 7. His life was given up in the service of the craft.

A man of sterling worth, quiet and unobtrusive in manner, deeds not words being his motto, he did yeoman service for bee-keeping in the county both as a lecturer, touring expert, and manager of the re-stocking apiary, which was one of the most successful in the country.

Having supervision of his work, I had the greatest respect for him, and can say that bee-keepers in Bucks have lost a good friend, as he was heart and soul in his work. His place will be difficult to fill. He leaves a widow and daughter, to whom I am sure the sympathy of all bee-keepers is extended.

W. HERROD-HEMPSALL.

The Beginnings of a Beginner.

The wandering life of those connected with the army is not very well suited to bee-keeping; but "bee-fever" attacks its subjects without regard to their calling.

We fell victims while my husband was attending a military course, after which we were to go to a new station. In our walks we discovered a very charming smallholding, named on the gate "The Strawberry Garden." As it was not strawberry time, we stopped to read the other attractions enumerated on a notice board:

Cut Daffodils.
Fresh Eggs.
Heather Honey.

Just over the hedge a young man was painting bee-hives, and when we had purchased our "cut daffodils" he kindly offered to show us his holding. We saw the Jersey cow which supplied the cream for the strawberries when they were in season, the hens, pony, garden, and half an acre or so of daffodils, and last, but not least, at the corner of the strawberry field the rows of bee-hives. Near by was the workshop containing all the modern appliances for honey production and hive making.

The young bee-master promised on the next fine day to show us the inside of his hives.

As I had not, like my husband, to listen by day to lectures on "Tactical Exercises," "The Effect of Tanks on Modern Warfare," and such interesting subjects, and in the evenings to work out attacks by mythical "red" and "blue" armies, I purchased what books I could find on bee-keeping, in order to study the subject.

"The Bee Master of Warrilow," by Tickner Edwardes, finally decided me to take the risk of starting to keep bees. For me, it would mean a risk, namely, the chance of moving house and home at very short notice, when the bees might have to be left behind or be subjected to a long journey at any season of the year. Some friends of ours started for a new station in a motor lorry with furniture, dogs, hens, and bee-hives all complete. Owing to a breakdown, all had to spend the night by the roadside, but, I believe, were none the worse.

Our visit to the bee-hives was full of interest to us, and to the bee-man full of pleasure, as he found his stocks had all wintered well. I was amused to see the use he made of his war-worn khaki clothes. They were made into quilts for the bees.

We longed to start bee-keeping at once, but as "the course" lasted for several months we had to content ourselves with ordering hives, foundation, rails, etc., to be sent to our new home on "the Plain." Our smallholder friend took our order for two home-made hives, and very good we have found them.

In buying our appliances I did not forget "gloves as recommended for beginners," and I have to own I am afraid that I do not feel happy yet when manipulating the bees unless I wear the said "beginner's gloves."

We had not so long to wait, after all, to make a beginning. Owing to the coal strike, all troops had to return to their stations, and the course came to an abrupt end.

After moving into our new home we placed the two hives in a nice sunny spot and got into touch with a local bee-keeper in order to bespeak a swarm. This old man was the antithesis of the very up-to-date young bee-keeper we had first met. One of the old, old school, his soft broad Wiltshire accent we found hard to understand; he could neither read nor write and seemed to belong to "the Plain" as it was long ago. Modernity, however, is encroaching on his old-world home. Close to his cottage stands an aerodrome, so his ears must be just as accustomed to the droning of the aeroplanes as to the droning of his bees. Full of old bee lore, before showing us round he enjoined upon us the necessity of always telling the bees of any important events in our household. When his wife had died the previous year he had tapped on the hives and informed the bees, or he assured us they would have left him. He also informed us that the bees would not work for two

masters; either my husband or myself would have to be master, and when our bees arrived, we were to tell them which of us was to undertake that duty. I do not think he quite approved when it was decided that I, having more spare time, should be their keeper.

Each afternoon we were to visit him until his bees swarmed again. As he had about thirty skeps we had not long to wait. About the third afternoon, on our reaching his cottage he told us he had "a lovely swarm come out at mid-day," and there under a hedge was a skep with a sheet over it, all ready to tie up and take home.

On reaching home we followed the directions of the books as to "hiving a swarm." Also believing the books that swarming bees do not sting, I did not wear my gum-boots over my thin stockings. Never again will I omit to do this, as in shaking out the swarm several bees alighted on my ankles, and I was initiated by them into one of the drawbacks—I may say the only drawback—of bee-keeping.

Our second swarm, which incidentally did far better than our first, was obtained through a third bee-keeping acquaintance, Mr. Pinder, of Salisbury. He must be known to many Southern readers of the B.B.J. for his helpful advice to those enthusiasts who consult him. We also received plenty of gratuitous advice from friends who heard we had started to keep bees. One old lady informed us that before touching the bees we should rub our hands on the pigs, as the bees greatly liked the smell of them. She also told us that they equally disliked the smell of horses, and we would certainly be stung if we went to the hives after a visit to the stables. I wonder what truth there is in these old beliefs?

The bees' arrival was not viewed with pleasure by one member of our household. An old soldier, he had suffered in the South African war from a trick of the Boers. As our troops were about to enter a farm they were furiously attacked by bees, whose hives had been overturned by the departing Boers, and this man was found in an unconscious state by his comrades, after having been terribly stung by the bees.

So far neither our English nor Italian bees have attacked him, and as he is a household treasure I sincerely hope they never will.

If I continue writing any longer this will soon become more than "The Beginnings of a Beginner," so I hasten to conclude, before I have to alter the title of

A Beginner.

Combs from Other Hives.

Honey is one of the finest sugars in nature. It is not generally known that it is animated not only by the electro magneto and vito-chemical life elements, but also by the animal life element which it absorbs from the body of the bee."

Henry Lindlater, M.D.

From *The True Nature of Vitamines*, Chicago.

Hints to Beginners.

By H. K. Springett.

How to Secure the Early Honey Harvest.

My experience of summers in this part of Surrey (Cheam), so far as good honey results are concerned, is that unless one has their bees very strong and in good heart to take advantage of the honey flow extending from middle of May to middle June, the rest of the season is so catchy and doubtful that more often than not the net result is most disappointing.

The weather after the middle of June seems to turn against us. The limes bloom, but the bees can't get out to them, and it is the same with the white clover. Cold and wet and not much sun just when we want warmth.

After the limes and clover, what have we to fall back upon. We have no heather, and so we are done. Last year was, of course, an exception.

One cannot find out much in one season, but I have kept bees around here for twelve years now, and know only too well that if I don't catch the May-June flow I probably shan't catch anything afterwards.

Now, I will try and explain to those who have just started or think of doing so next year, and are situated in a similar locality to mine as regards flora and climatic conditions, with no heather as a forlorn hope (even this fails all too often), what to do in order to have one's bees ready to catch the early harvest which so seldom fails us.

To look a long way ahead is the only way. In July one should be thinking of next April and May. The bee-keeper, to get honey, must not have swarms in May and early June, and the first step in preventing swarms is to have a young queen. Secondly, he must have a good supply of young bees produced from August and onwards to ensure safe wintering and *very strong stocks in the Spring*; here again it is the young queen which will do the necessary. Therefore the first consideration is requeening with a fertile tested queen of a good strain at the end of July. By this means the foundation is laid for a good start.

At one time I used to find it against the grain at the end of July removing supers and accepting the fact that the honey flow for surplus was over, the desire being to hang on and on in the hope of just a little more, with the result that it became late for requeening and there was no time to do a little stimulative feeding before I fed solid for the winter. I am convinced that stimulative feeding *at the right moment* is of inestimable value. To do so in August will result in the hive being crammed full with young bees when you are ready for the feeding proper the first week in September. Looking further ahead still, it will mean a full and strong stock in the spring instead of a stock entered with old bees and *dwindling daily to almost nothing by April.*

A stock coming out well in the Spring and fed gently with syrup in April and well wintered with at least 30 lbs. of stores will get you easily 50 lbs. of honey by the first week in June. Therefore, I would say to

all those new at the craft, look ahead in July, lay your foundations then for the next year's early harvest, requeen, and take off the supers if you have no heather and stimulate in August, and then next year, if the first half of July should be wet, windy and cool, you will not be so disappointed because the bees cannot get out to the limes and the white clover, because your kitchen shelves will be straining under the weight of rows of bottled honey taken in May and early June as a result of your forethought and wisdom.

Keep a book and make a record of all your manipulations, what you do, when and why. This will prove a very valuable reference.

Hertford, Ware and District Beekeepers' Association.

HONEY SHOWS HELD AT HERTFORD AND WARE.

Very successful shows were held in conjunction with the Hertford Horticultural Society on October 26, and the Ware Horticultural Society on November 2. The exhibits were excellent, the carefulness of the members by the cleanliness and general get-up being very pronounced.

I am sure you, Mr. Editor, would have been pleased to see such a grand display, especially after such a poor season.

There is no doubt our members have been greatly helped by the County Council lectures given by you and Mr. W. Herrod-Hempsall.

It will, I am sure, not be out of place in tendering our thanks to the Hertfordshire County Council for the great help given by them to this Association by allowing these lectures. The awards at the Hertford Show were as follows :—

Class 1 : 6 Jars Light Liquid Honey (9 entries).—1, A. Willmott, Stanstead Abbots; 2, Dr. Stewart, Ware; 3, J. Ditton, Ware.

Class 2 : 6 Jars Granulated Honey (9 entries).—1, G. Biscoe, Hertford; 2, F. Price, Hertford; 3, A. Lindsell, Great Amwell.

Class 3 : 6 1-lb. Sections Honey (4 entries).—1, G. S. T. Walters, Hertford; 2, G. Biscoe, Hertford; 3, Rev. Drake, Thunderidge.

Class 4 : One Shallow Frame of Comb Honey (1 entry).—1, Rev. Drake, Thunderidge.

Class 5 : Beeswax (1922 Produce), 1 Cake weighing between ½ lb. and 1 lb. (6 entries).—1, A. Lindsell, Great Amwell; 2, G. Biscoe, Hertford; 3, Rev. Drake, Thunderidge.

Class 6 : Best Collection of Honey, Comb and Liquid (2 entries).—1, F. Price, Hertford; 2, J. Ditton, Ware.

The same prizes were offered at the Ware Show

AWARDS.

Class 1 (8 entries).—1, A. Willmott, Stanstead Abbotts; 2, Dr. Stewart, Ware; 3, G. Biscoe, Hertford.

Class 2 (6 entries).—1, F. Price, Hertford; 2, G. Biscoe, Hertford; 3, J. Ditton, Ware.

Class 3 (4 entries).—1, G. S. T. Walters, Hertford; 2, Rev. Drake, Thunderidge; 3, G. Biscoe, Hertford.

Class 4 (1 entry).—1, Rev. Drake, Thunderidge.

Class 5 (5 entries).—1, Rev. Drake, Thunderidge; 2, G. Biscoe, Hertford.

Class 6 (3 entries).—1, F. Price Hertford; 2, G. Biscoe, Hertford; 3, J. Ditton, Ware.

A Bronze Medal, presented by the Apis Club, awarded to the member obtaining the highest number of points at both Shows, G. Biscoe, Hertford.

J. HILL, Hon. Secretary.

Cambridge and District Beekeepers' Association.

A meeting of the association was held on Saturday, November 18, 1922, at Upton House, Cambridge, by Mr. and Mrs. C. F. Clay's invitation, to compare notes on the results of the past season and to consider a programme for the coming year.

The President of the Association, Sir Douglas Newton, M.P., was present, and received a hearty vote of congratulation on his re-election as the Parliamentary representative of the Borough of Cambridge.

The report of the Association's expert was read, and served as a basis of the discussion. He had visited more than 100 apiaries in the county, and had found the bees plentiful and fairly healthy. He had not met with a single case of foul brood and very little crawling, but mites were found to be present in some colonies; the affected apiaries were being kept under observation. Strong stocks obtained honey in May, but after the weather broke the honey flow failed, and swarming became excessive. One bee-keeper had seventy-five colonies in June, the product of fifteen spring count, and a similar rate of increase was not uncommon in other parts of the county. Losses from starvation have already occurred, and further losses must be expected.

An interesting discussion followed, from which it appeared that members whose hives were situated in the sainfoin districts had done moderately well, some having harvested about 50 lbs. per hive, but that, generally speaking, the crop was a failure, and serious feeding had been necessary. A complaint that the wire queen excluders were unsatisfactory, in that they allowed the queen to enter the supers, was endorsed by several members. Even quite new excluders carefully handled had proved unsatisfactory.

The price of honey was discussed. One of the largest bee-keepers in the country put it to the meeting that the small bee-keeper did not reckon up the cost of production with sufficient care, and he claimed that a large quantity of honey is consequently sold to the dealers at considerably less than cost. This is very damaging to the man who is trying to produce honey on a commercial scale. It was stated that the provision dealers this year were offering a very low price which was obviously much below the cost of production. It was thought the Association could do useful work by keeping members advised of the current price which they could expect to obtain both for bulk and for small quantities. The useful suggestion was made that the reasonable price should be 50 per cent. more than the price of a good quality jam, on the ground that a pound of honey goes as far in the household as a pound and a-half of jam. The question, however, is very difficult, and the small producer appears to be at the mercy of the large buyer unless he can find his own retail market. With regard to the programme for the next season, several members said that they had benefited by the demonstrations arranged this summer at Shelford and Com-

berton, and hoped that similar demonstrations would be given next year. A suggestion was also made that the committee should try to make arrangements for a small central apiary to be set up which would be of easy access to members, and to give there a series of demonstrations in practical bee-keeping in the spring and summer. The meeting then closed, and those present were entertained to tea by Mr. and Mrs. Clay, whose kindness was much appreciated.

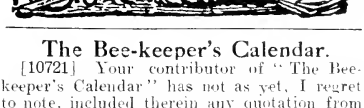
E. C. R. Holloway, Hon. Sec.

Betley, Staffordshire.

Under the auspices of Staffordshire Education Committee, Mr. J. Price, the bee expert from the Farm Institute, Penkridge, Staffs., gave a series of six lectures, five of them with lantern slides, on "Bee-keeping" in Betley School.

There was an average attendance of 50. Among the audience were a few enthusiasts, but to those who were ignorant of bee-keeping the interest was kept up to the last, and many attended all or nearly all the lectures, and the lecturer had quiet, attentive audiences throughout.

The last lecture, in some ways the most interesting, was devoted to practical instruction on making up frames, sections, etc. The lecturer gave excellent advice on artificial and natural swarming, and after the last lecture answered many practical questions.—(*Communicated.*)



The Bee-keeper's Calendar.

[10721] Your contributor of "The Bee-keeper's Calendar" has not as yet, I regret to note, included therein any quotation from the works of Jean Rucellai, 1524, and Dr. John Evans, 1806-13, two notable writers in verse on the honey bee. The classical poems of these authors, so different in many features, are both of such great interest and beauty as would entitle them to recognition. Evans is, of course, well known and freely quoted in various works on the honey bee, while Rucellai's poem, perhaps better known to those specially interested in bee bibliography, is, I think, of at least equal interest to that of Virgil.

Noel Vaslet

Remembrance Day.

[10722] I was much touched by the impressive article by the Rev. E. F. Hemming in your issue for November 16 on "Armistice Day."

It came so opportunely with my appeal for Sergt W. Naish, of Sea Mills, Bristol, whose service in France is responsible for his present unemployment.

I did not mention before that he was an ex-Service man because so many of us are, and it implies a comparison with those who had to "carry on" at home under conditions which I, for one, would have found more irksome than those I experienced for nearly five years abroad, Gallipoli excepted.

The best way, perhaps, to reverence the memory of those dead we left behind, many of whom we learned to love, and whose silent forms, reverently covered by a blanket, we had to pass and re-pass on our round of duties until their removal by the ambulance, is to help those who returned.

I have to acknowledge, to date, three kindly offers from Mr. Rose (Seeds and Bees, Ltd.), of Liverpool, Miss Greenwood, Clitheroe, Lancs, and Mr. John Lee, a veteran bee-keeper, of Dunston, Biggleswade.

The smallest sums will be welcome.

My sergeant friend is going to be established in bee-keeping this next spring.

His little apiary will be the first one in that garden-suburb of Sea Mills, and no doubt many others in that happy little community will take the fever and start on their own, to their great benefit and that of the now bee-less countryside thereabouts.

Such is my hope and effort.

H. O. Morgan (Capt.).

Questions, &c., for Bee-Keepers for Self-Examination.

681.—Account for the variations in the quantity of water in honey.

682.—Describe *Achroia grisella*, and state why it is of interest to the bee-keeper.

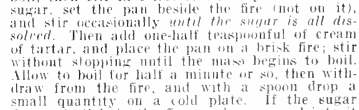
683.—How long has the system of tiering compartments in hives been known, and who is credited with the invention of it?

684.—Describe how a bee disengages a load of pollen from its pollen baskets, and how the pollen is placed and packed in a cell.

685.—Select one of the methods of rearing queens and explain it fully.

686.—When a doubt arises as to whether an exhibit of honey is put in its proper class for colour—light or dark—how is the question determined?

J. L. B.



"Candy" (Notts.).—*Making candy.*—The recipe we use is as follows:—Use a brass or enamelled iron pan, put in one pint of water, allow to boil, then stir in 6 lbs. of loaf crystalised cane sugar, set the pan beside the fire (not on it), and stir occasionally *until the sugar is all dissolved.* Then add one-half teaspoonful of cream of tartar, and place the pan on a brisk fire; stir without stopping until the mass begins to boil. Allow to boil for half a minute or so, then withdraw from the fire, and with a spoon drop a small quantity on a cold plate. If the sugar does not stick to the finger when pressed into it and withdrawn it is boiled enough. If sticky it must be boiled another minute, and again tested. If you have a sugar boiler's thermometer boil until the temperature reaches 235 deg. Fahr. When boiled sufficiently, allow it to stand *without stirring* until the finger may be kept in it without scalding, then stir briskly until the mixture stiffens and turns white. Before it is too stiff to run freely, pour into suitable moulds or boxes. Any medicine should be added while stirring.

Suspected Disease.

W. C. (I.O.W.).—We do not find Acarine disease in the bees sent.

A. C. (Leyton). Both lots of bees you sent were free from Acarine disease, but more bees should have been sent. Four or five are not a satisfactory test.

Special Prepaid Advertisements.

One Penny per Word

Will advertisers please read these Rules carefully in order to save trouble, as they will be strictly adhered to?

Trade *advertisements of Bees, Honey, Queens, and Bee goods are not permissible at above rate, but will be inserted at* **1½d.** *per word as* **"Business"** *Announcements,* immediately under the *Private Advertisements. Advertisements of Hive-manufacturers can only be inserted at a minimum charge of 6s. per ¼in., or 12s. per inch.*

PRIVATE ADVERTISEMENTS are only intended for readers having **Surplus Stock** *to dispose of.* **Driven Bees, Nuclei,** *and* **Queens that are reared or imported for sale,** *are Trade Advertisements, and can only be accepted under trade terms. A charge of 6d. extra per insertion will be made if a box number is used.*

Orders for three or more consecutive insertions in "The Bee Journal" entitle advertisers to one insertion in "The Bee-Keepers' Record" free of charge.

WANTED, Light Car, Singer, Swift, or similar make, about 7 to 8 H.P.—W. HERROD-HEMPSALL, Old Bedford Road, Luton. k.42

WANTED for the Continent, a Queen Breeder, methodical and capable of working to schedule time in producing queens in quantity; single person of either sex.—Apply, giving references, to Box 93, British Bee Journal, 23, Bedford Street, Strand, W.C.2. k.2

BERKSHIRE HONEY, guaranteed pure, 1s. 6d. lb., in 7-, 14-, 28-lb. tins; tins and carriage free on 28 lbs.—DR. BELL, Lambourn, Berks. r.k.50

THE World's Famous Raspberry, Lloyd George, perpetual fruiting, 10s. dozen, 60s. and 70s. per 100.—J. J. KETTLE, The Violet Farm, Corfe Mullen, Wimborne, Dorset. h.78

TWO BEE-KEEPERS.—For Sale, by private treaty, a small Apiary, four Hives of Bees, empty Hives and Skeps, Extractor, and a quantity of general equipment. Any reasonable offer considered.—Apply to MRS. ELLISON, Harlton Rectory, near Cambridge. k.85

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1½d. per word.

THE SOUTH HAMPSHIRE APIARIES beg to announce they are now booking orders for next season, and would advise their customers to book early to ensure first delivery.—Catalogue on application to H. E. NEWTON, New Milton, Hants.

TAYLOR'S SOFT WHITE CANDY.

Manufactured from guaranteed pure White Cane Sugar.

1/- per lb., post extra,

or 4lb. parcel, **5/-** post free ; 7lb., **8/-** post free ; 10lb., **11/-** post free.

Special quotations for large quantities.

Feeders, Quilts and Winter Appliances of every description. Illustrated Catalogue post free on application.

E. H. TAYLOR, Ltd., Beehive Works, WELWYN, HERTS.

PRIVATE ADVERTISEMENTS.

COTSWOLD HONEY.—1-lb. screw jars, 18s. dozen; cases 6d.—BOWEN, Coronation Road, Cheltenham. k.87

HONEY, in 1-lb. nominal bottles, green tinted, 17s. per dozen; white flint, 18s. per dozen; in tins, 1s. 3d. per lb.—HARVEY, The Apiarist, Andover. k.81

FOR SALE, Motor Cycle, Ivy, 2¼ H.P., 2-stroke, in good condition, just been repainted, had new bushes throughout and new piston rings, £16; must sell; also Model Vertical Steam Engine, 1¾-in. bore, 1½-in. stroke, 10 in. high, very strong model, 25s.—Box No. 97, B.B.J. Office, 23, Bedford Street, Strand, W.C.2. k.82

HEATHER HONEY.—For Sale, by an English bee-keeper, located in the heather district of France, his 1922 crop of Heather Honey, comprising over 2 tons of A1 quality, equal to the finest Scotch produce. It is packed in casks averaging 2½ cwts., and as the price is right it is well worth the attention of bottlers. Samples sent free and price to bona-fide buyers.—W. WILSON, Laurent par Lavaraac, Lot-et-Garonne, France. r.k.62

BEE EXPERT would like to rent small Mixed Holding, up to 10 acres, in good honey district, suitable fruit, fowls, bees, etc.—Information to Box No. 96, B.B.J. Office, 23, Bedford Street, Strand, W.C.2, will be appreciated. r.k.70

CANDY, from pure cane sugar, 4 lbs., 4s.; 10 lbs., 9s.; post free; larger orders 8½d. per lb., f.o.r.—COBB, 33, Bevan Road, Plumstead. r.k.79

CANDY.—7 lbs., 7s. 3d.; 10 lbs., 10s.; post free.—HENSLEY, Luton Apiary, Chatham. r.k.86

"W.B.C." HIVES.—Make your own. Save money. Simplified Working Drawings 2s. 6d. Novice can understand.—CANDY, 28, Dovey Road, Moseley, Birmingham. k.83

ONE 56-lb. tin Irish Heather Honey, 65s., carriage paid.—PEARSON & GALE, Marlborough. k.84

HONEY FOR BEE FEEDING.—West Indian, new, 56 lbs. 38s. 6d.; Californian, old crop, 60 lbs. 30s.; carriage paid; reduction quantities; samples on application.—LONDON TRADING AGENCY, 32, St. Mary Axe, London, E.C.3. r.k.72

STRICTLY BUSINESS.—Flavine—S. Bee Candy, 4 lbs., 5s.; 6 lbs., 7s.; 10 lbs., 11s.; 20 lbs., 21s. Larger quantities by passenger or goods train at a reduction in price.—S. H. SMITH, 36, Maid's Causeway, Cambridge. r.k.65

Advertisements must reach us NOT LATER than FIRST POST on MONDAY MORNING for insertion in the "Journal" the same week.

PURE CLOVER HONEY in 7-lb. tins, an Ideal Xmas Gift.—PEARSON & GALE, Marlborough.

Select Tested Golden Queens of World-Famed American Italian Strains, direct from the Leading Queen Rearing Apiary in Great Britain.

Recent investigation having shown that certain methods of Queen rearing, which ensure the production of Queens of the highest grade with great regularity, result in the avoidance of losses and delays in mating, it has been possible to largely increase the output of Mated Queens whilst maintaining the very high quality of the Queens from this Apiary.

Prices have, therefore, been considerably reduced for the coming season.

Other improvements having also been effected, the despatch of Mated Queens on specified dates from June 5th onwards can be guaranteed, where orders are placed in advance, and cash will be refunded if unforeseen delays occur.

As all Virgin Queens in the mating nuclei are destroyed unless mated within 10 days of emergence from the cell, and all mated queens retained in the nuclei until capped brood is produced, all Queens can be relied on as fertile and prolific. Purity of mating is guaranteed, and any Queen proving unsatisfactory in this or any other respect will be replaced free of charge. The Virgin Queens supplied are allowed to emerge in presence of young bees, and are, therefore, well nourished at the most critical period of their existence; those are of extremely high quality at a reasonable price, and will be replaced free of charge if not mated within 21 days of delivery.

The Breeding Queens have been carefully selected from strains noted for working qualities, temper, prolificacy and colour, and are probably the finest to be found in Europe.

Breeder No. 1. Home-raised Penna Queen crossed American Golden Drone.
No. 2. Imported Penna Queen selected by Signor Penna as a Breeding Queen.
No. 3. Imported Jay Smith American three-banded Golden.
No. 4. Home-raised Ben Davis American five-banded Golden.
No. 5. Imported J. M. Davis American three-banded Golden.
No. 6. Imported Jan Strgar Carniolan.

Selected Drone Parents:—Jay Smith Queens not directly related to No. 3 Breeder.

PRICES FOR 1923.

	May.	June.	July.
Select Tested Fertile Queens	15/-	10/6	9/6
Virgin Queens		4/-	

For use in emergencies a number of August-raised imported and home-raised Italian Queens are available for delivery in March and April at 20/- each.

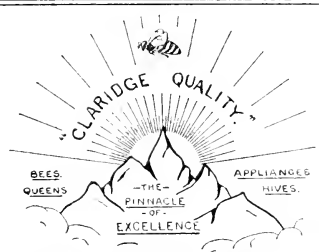
Terms: Cash with order. 10 per cent. discount on cash orders placed before January 15th. Lists ready shortly.

A. M. STURGES, Shenstone, Hartford, Cheshire.

RYALL'S ADVICE ON WIGHT-ACARINE TROUBLES, 5s. 6d.—8, Ospringe Road, N.W.5. r.k.67

STEEL'S SUPER CANDY.
4 lbs., 4/8; 10 lbs., 10/-; carriage paid.
Special quotations for quantities.
STEEL'S BEE HIVE WORKS,
WEST ASHLING, CHICHESTER.
Branch: THE BEE HIVE, BROYLE ROAD, CHICHESTER.

HAVE YOU READ "THE BEE WORLD"? If not, why not? Every number in itself is a useful literary work for practice and reference. Specimen copy free.—Offices: THE APIS CLUB, Port Hill House, Benson, Oxon.



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For best bees, queens and appliances come to PEARSON & GALE, Marlborough.

ESTABLISHED 1870.

Premier Quality—Got rid of all others.

"In the year 1920 I purchased one of your 'White Star' Nuclei, and although, as you know, the season was very bad, I did exceedingly well with your bees, and I am ordering a further supply, *having got rid of all others.*"—C. W.
[Later] "I received the bees well packed and in good condition, only five dead bees in the lot. I can assure you I am well satisfied." Stairfoot, Barnsley, 1922.—C. W.

The only Pedigree strain bred by intense selection of both queen and drone breeding mothers for more than 30 years. 20-page Annual and Reduced Price List for 1923, free.

S. Simmins, Queenland, Heathfield, Sussex.

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Made from Pure Cane Sugar, and guaranteed free from Glucose. Prices:—

1 lb. at 1/-, post 9d. 4 lbs. 5/-, post free.
7 lbs. 8/- post free. 10 lbs. 11/- post free.

Special prices for large quantities on application. SYRUP in 7 lb., 14 lb. and 28 lb. tins.
Use the WORMIT Combined Feeding Board and Winter Cover, as advertised in issue of 24th August.
FEEDERS of every description. Full particulars in Illustrated Catalogue sent post free on application.

Dadant's New Patent Wired Foundation.

Supplied in the sheet, with wires embedded all ready for use.

SAVES TIME. SAVES LABOUR. SAVES MONEY.

Price only a little more than that of ordinary foundation.

Prevents sagging and gives a perfect comb.

Has been tested and proved for several years in hundreds of colonies.

Send for a sample pound and judge for yourself.

We are also making special frames to suit this foundation, but old frames, if in stock, can be adapted by the use of a special bottom bar.

R. STEELE & BRODIE,
Bee Appliance Works, WORMIT, SCOTLAND.

OVERTON'S MEDICATED CANDY.
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BEES BEST FRIEND

The Bee-Keepers' Calendar.

DECEMBER, 1922.

7 Thursday. "Even heathen yet, the savage Dane
At Iol more deep the mead did drain."—*Scott, "Marmion."*

8 Friday. "Through the sunny garden
The humming bees are still;
The fir climbs the heather
The heather climbs the hill."—*Masefield, "Chillingham."*

9 Saturday. "And now, when comes the calm, mild day, as still such days will come,
To call the squirrel and the bee from out their winter home.
\- - - - - - - - - - - -
The South wind searches for the flowers whose fragrance late he bore,
And sighs to find them in the wood and by the stream no more"
W. C. Bryant, "The Death of the Flowers."

10 Sunday. "The fairest morns are swiftest to decay,
Soon hushed the babblings of their tender hours,
Sullied the bee's clear wing, faded the flowers,
And now rides o'er the grave of Yesterday."
Virgil, Georgics, Book IV.

11 Monday. "There are the beehives ranged in the sun;
And down by the brink
of the brook are her poor flowers, weed-o'errun,
Pansy and daffodil, rose and pink."
Whittier, "Telling the Bees."

12 Tuesday. "Come with me through meadows flow'ry
Up where furze and heather blow,
If my secret golden dowry,
Lasses, you would like to know.
. . . . . .
Kerry cows upon their brows
Bear a pair of branching horns;
But my kind they wear behind
Only one, like unicorns.

Ah, then, your herds are the bees on the height—
Deed, and this time you've guessed aright."
A. P. Graves, "The Riddle."

13 Wednesday. " . . . Was he not
A full-cell'd honey comb of eloquence
Stored from all flowers?"—*Tennyson, "Edwin Morris."*

The Question of Inbreeding.

The question as to whether bees, with special reference to our native British hive bees, have degenerated through in-breeding, and thus become more susceptible to the ills that bees are heir to, is one that bee-keepers have debated for a long time. Like many other apparently simple questions, it is not so simple as it seems when all the arguments for and against have been considered. Mr. Flashman raised the question in a short letter ("B.B.J.," November 16, p. 561, 10716), and we have a further valuable contribution in his letter this week.

It is a favourite argument with many bee-keepers that our own native bee is played out, mainly through "inbreeding." By the way, we have also heard, or read, that, in the opinion of some wiseacres, not only the bees, but the people also of this "tight little Island" were played out and degenerate, but that was prior to 1914. We have shared neither view, and are inclined to agree with those who think it would have been better if foreign races of bees had never been introduced at all, and that it would have been more useful to have tried to improve the native bee by selective breeding and let the foreigners alone.

We quite agree with Mr. Flashman when he says: "Honestly, I think it more likely to be man who is wrong, and who, by his tampering with the delicate adjustment Nature sets up, has caused degeneration." Man is too fond of trying to "improve on Nature," and though he may apparently succeed in many ways, there is often a corresponding failure in others.

Take our wild bees, Bumbles and others. They breed unfettered by any interference from man; and can anyone honestly say they have, on the whole, deteriorated? Then take the wasps. Does anyone think they would be improved by the importation of a few queens from the Continent, or elsewhere? So far as we can see, they are as virile now as they were 50 years ago.

We shall be pleased to hear what other readers think after carefully reading Rev. E. F. Hemming's and Mr. Flashman's letters, the latter especially. There is at least one point mentioned in it that the average bee-keeper or queen breeder does not as a rule think about.

Jottings from Huntingdonshire

Someone has already asked me why, if in-breeding is so detrimental to the production of strong, vigorous bees, the bees of the woods are able to hold their own against their many enemies. One could write a six-shilling volume in reply to this, and since I have to try and explain the reason in a few lines, I am fearful lest I should not make myself clear. At the onset, let me say that it is a question of the survival of the fittest. But lest I should be mistaken, I would say this hackneyed phrase does not always mean what it is meant to imply. While it is true the fittest survive, it does not follow that those surviving are the best; they might be the worst. One has only to read the history of human races to learn that again and again mentally superior races have gone down before the rush of barbarous tribes. In other words, nations have risen to a great height mentally—developed their mental power at the expense of their muscle. A semi-barbarous race has come along with muscle well developed, and the mental race has collapsed, the half-barbarians taking possession and ruling according to brute instinct, disregarding the fine form of government they have displaced. This kind of thing goes on in the lower animal world, the surviving being perhaps animals or insects fitter only in brute strength. I think I hear someone saying if this goes on indefinitely it must lead to ultimate degeneration. It would were it not for "a divinity which shapes our ends, rough hew them how we will." Fighting disease is, however, in a different category. The fittest which survive a pestilence are those best able to withstand the germ responsible for the plague. Evidently, then, the truly wild bees have resisted successfully the ravages of the Acarine plague, but from what one learns from various parts of the country, in doing so they have degenerated as honey gatherers. Having developed a great robbing instinct, they appear to have become enemies of the hive bee. I am speaking of the true British black bee, and sorry I am to have to narrate this of them. One knows, of course, that in the woods are to be found British Brown, Holmewood, Italian and Hybrid bees, but domiciliation in a tree does not imply immunity from disease; in fact, where you find disease prevalent among the apiaries, it is sure to be found among the wild stocks of the woods in the same neighbourhood. In-breeding, then, weakens stamina and fixes certain characteristics, among which may be a tendency to offer suitable breeding ground for disease germs. How is this to be combated? By introducing new blood. It is an absolute necessity in successful bee-keeping to get unrelated queens. To those who hesitate at the cost I would say at least get one unrelated queen and use her to supply the bulk of the drones in the breeding season. It cannot be too often emphasised that the possibility of drones mating with virgin queens depends on strength of wing. Those drones which never seem to

fly more than a few yards from their home should be trapped and destroyed, and those drones which have no sense of location should be likewise treated if you are wanting virgin swarms. The drones to retain are those which grow a rudder in proportion to their wings; these are not only active, but will show fight. Had they a sting they would no doubt make short work of the drones with inferior strength and flight power.

Something has been said lately about Italian bees. It is held by many apiarists that importing queens from one breeder abroad is importing queens which are already in-bred. If the queen breeder does not take steps to prevent in-breeding, the statement is bound to be true. I have the impression, however, that the great Italian queen-bee importers are as anxious as we are to guard against related matings.

Not a few bee-keepers maintain that the only way to get an immune bee is by selective cross mating. This will breed out bad qualities and fix the good ones. The British Brown bee is an example of this. A hundred years have helped to fix certain marks which when bred out with cross-mating, say, with goldens, always reassert themselves in the third generation. Our wild rabbits are examples of this. The indigenous British rabbit was white with coloured markings. The Romans introduced the brown rabbit, which mated with the whites, and increased in great numbers. The white underside and tail is all that remains of the original rabbit of these isles; so in the British Brown bee much of the native black has disappeared. Selective cross-mating means more than this—producing mixed breed, but not mongrel bees. Let me, in concluding (for this week), give an example. A notable bee-man of twenty years ago introduced ten Italian virgin queens into an apiary of Carniolans. The virgins from this cross were introduced into an apiary of Dutch, and the right progeny mated up to English drones, the resultant virgins being given back to Italians, and the same order followed over again for several years. A distinct variety of bee was the outcome of all this, and as the bee-man in question was careful to keep only the best virgins and the best drones, the resultant bee was one for which he could claim recognition.

Steeple Gidding. E. F. HEMMING.

Prison Repartee.

Canon Simpson (of St. Paul's) told the following story at a meeting which I attended recently :—

In the large prisons an up-to-date arrangement is to give lectures, etc., to the prisoners periodically.

On this occasion the lecture had been on bee keeping.

When the prisoners were dispersing to their cells one called to another—"Say, Bill, didst tha marry a queen bee?" "Noa," replied Bill. "I married a wasp, and that's what I'm here for."

V. B.

Week-End Bee-Keeping.

BY S. H. SMITH, CAMBRIDGE.

(*Continued from page* 581.)

We toasted the missing members of the D. B. family, the future apiary, the tortoise-shell tom, and then went into the garden.

There was little to do in the D. B. apiary. The board in front of No. 1 showed no dead bees, but plenty of live ones were going in and out, and the entrance was well guarded. The box in front of No. 2 was empty, and D. B. said that the twins had counted only three "crawlers" from Saturday evening until Wednesday noon, when they had left for Bournemouth. He had noticed none since. No. 3 had also an empty box under the edge of the alighting board, but apparently no queen had been thrown out, as it, too, was empty. A couple of wasps were darting from hive entrance to hive entrance, but they were quickly repulsed by alert guards.

"That's the next thing we have got to fight, D. B., though 1922 was as rough on wasps as it was on bees. The earlier wasp broods were smaller in size, individually as well as collectively, than any I've observed before. The nutritial starvation, which normally prevents the development of the reproductive organs in the 'workers' of the social insect tribes, apparently affected the somatoplasm as well as the germplasm of the 1922 wasps. But the later broods came normal in size, and we must prepare to repel an invasion of our hives."

"If you have marked down the nests during the summer, it is easy to destroy them. The way to victory over insects as over humans is to attack them and, incidentally, to annihilate them."

"I can well believe, old man, that you have not had time to look up the wasp nests in your neighbourhood. But when your apiary grows you will find it pays to do so. For this year you will need only a few traps. As I shall be arranging such in my apiary this afternoon, you will learn all about them. So if you will put aside a pint bottle of beer, pulling the cork so as to let the air in to sour the beer, it will be ready for use in a few days."

"About my pots and pans? I'll make you a present of them. The whole outfit is only worth a few shillings. Yes, I thought you would find the arrangement handy after gardening. And Mrs. D. B. has been most kind and obliging about seeing to the supply of clean towels and water."

"Ready for lunch? I should say so! A hollow spot in my 'innards' has been growing and growing for the past half hour. Come on. I'll race you to town for a 'pretty,' or anything else you can suggest."

The soup was good, the halibut excellent, but D. B. hardly listened when I told tales of the war diet served at this very hostelry during the critical days of '17 and '18.

"Spuds and spuds, old man; one slice of bread, no butter, not even cheese. If you wanted more you began again, paying, of course, full rates for the second helping. If

you came early you might get in on a dab of poisonous coloured blanc-mange, otherwise nix."

Then I noticed D. B.'s eyes glistening as fat old George himself came towards us, carrying extra weight in the shape of two large plates topped by brightly gleaming metal covers. He place a plate in front of each of us, removed the covers with a flourish, and displayed two of those deliciously toothsome, juicy breasted "La Bresse" chickens, piping hot, done to a turn, and resting on generous slices of milk toast. The verdict was unanimous, and George retired beaming.

It was no time for talk, and for some minutes we munched and munched. I was half-way through mine when I glanced at D. B.'s plate and was surprised to find he had finished his chicken already. He was toying with a glass of Margaux and eyeing the ruby tints appreciatively.

"You said something one day about a cat-complex, Week-End; I am the victim of a chicken-complex."

"It looks rather the other way about, dear boy, but go ahead with your story if it will relieve your mind."

"In 1917 I lay in a Malta hospital, down with para-typhoid. You know how they coax you back to life by providing plus X nurses—houris who flit about noiselessly, whose very touch is a caress, whose bright smiles bewitch. Then I reached the stage when the doctors try to kill you via the starvation route. My whole body cried out for solid nourishment, and they allow you only pap. And the houris were gone. Other nurses took their places. They were good, of course, but there was something missing. I wanted to kiss one, though, one day when she told me I was to have chicken for dinner next day."

"Well, why didn't you, D. B.? Mrs. D. B. would surely have forgiven you a little thing like that."

"I could hardly sleep that night for slobbering in anticipation of the coming feast. The day dawned; I could smell the chicken cooking; the hour arrived. The nurse came into the ward carrying a small cup on a plate and approached my bed. 'Where's my chicken?' I yelled. 'It's in this cup of beautiful broth,' she answered. With one wild sweep of my arm I knocked the cup out of her hand, cursed her infamously, then turned my face to the wall and fainted away."

"Dear me! how rude. But I think I can imagine what your feelings were. Every cell in your body was alive with anticipation. The good news had been wired and wirelessed to every corner of your anatomy. You could feel every cell pulsing and throbbing and swelling with delight."

"Yes, yes. You have described it exactly."

"This biotic energy of the body cells, which causes the phenomena of gland secretions, nerve impulses, muscular contractions, etc., in you and all living structures may well be compared to what we may call the bee-otic energy inherent in the bee colony——"

"George!" shouted D. B. "Oh, George! Bring along the next course in a hurry."

(To be continued.)

Jottings from Ashdown Forest

Bees should now be practically at rest, with but little disturbance to see all is snug and comfortable, with a supply of extra food, in the way of candy or loaf sugar; if candy, it is well to have a supply of loaf sugar as well when making the feeding visits; where a cake of candy is partly consumed, it is more convenient to have the sugar to add to the diminishing candy than breaking up or adding another whole cake of candy. Likewise, there will be less danger from the large amount of unstealed store in many hives if bees have a heap of *dry* loaf sugar to run to for some time. I notice some advocate a large supply all on at once, but I prefer about up to 1½ lbs. supply, which should be well over the cluster and covered nicely to be warm. With a large box of candy, as some use, there is too big a space when candy is consumed, either too many bees crowded up into it or it gets too far away from the cluster. A large hole in a candy-box takes too many bees off the comb, which is their natural place to winter on.

Bees are bees, and follow their natural instincts, and cannot be taught or trained to anything; therefore bee-keepers that do learn by experience, or any source, must study to follow "Nature," which can be assisted, but every time we try to go against Nature we come a "cropper."

The science and practice of bee culture has advanced enormously during the last century, but bees are still bees—but *are they degenerating*? Some say, but there "didn't use to be so much trouble about swarming. They used to have their natural swarming flutter and settle down to getting honey; but now they seem to do nothing but fill everything with brood and swarm." I have had a good share of experience that this is correct. One hives a swarm into a large skep or any receptacle to hand. The bees build comb quickly to the limit they can cover. Though they have plenty of room, they build no more comb (unless it is drone comb, but rear queens and go in for swarming frolics. A swarm hived in a new bar-frame hive with foundation and plenty of supers with foundation do the same, much to the disappointment of the owner, who has spent a good lot on bees and now wants honey (generally in sections). Some think it is the importation of bees, that Nature has not supplied with instincts suitable to our climate, causes the trouble. There may be something in it, but my experience is they are all pretty much alike, and that it is our

seasons that are different or bees are degenerating.

Bees being away from hive in super and killed on returning after coming back from show (Mr. Hamshar, p. 546).—Probably the trouble was having been confined for several days without the queen; they had become demoralised, and refused to feed themselves; therefore, when Mr. Hamshar had, after his "all the job in the world," got them out, they arrived home empty and bewildered, and their sisters treated them as strangers.

Safe wintering (Mr. Ellis, p. 547).—A lot of sealed, natural or fed store in a hive with too few bees to cover it, gets icy cold, the bees contract farther away from it, and often there is no store at all in cluster. At times, maybe, that sealed store contains something not good for them, though natural food.

I, too, would like to see balance sheets of some of the "scientific" bee-keepers. With me it is not what I could do with, but what I can do without. To make bee-keeping pay we must get a larger output at less cost, and be prepared to accept lower prices. It is not altogether the war that made honey fetch the prices it has, but the depletion and loss sustained by I.O.W. disease, English honey being scarce, and the imported inflated in price. Had this been a good year for bees, I wonder how low the price would have dropped? As many having good honey and no previous market would have accepted something, perhaps less than 6d. a pound, others would naturally have to come down, too. It is no good to tell a customer what bees have cost; it is what he (or she) has heard honey is being sold at. I have known honey to be sold at less than 6d. per lb. We have to get tip-top honey at lower cost or drop out. What it seems we really need when we do get a good lot of prime honey is one of the big firms to specialise in honey and buy all that is available, grading, packing and sending it wherever it will sell at a good price. I doubt if any special company or association can do any good at it. We once had a British Honey Company.

Foundation Keeping (p. 549).—Editorial request for readers' views. The foundation may already be previous to this year's make and prove worthless, or it may be comparatively new. I should advise five fresh new sheets and some of the present stock if for a swarm. The sheets of old foundation may be warmed in front of the fire for a few moments till the dullness goes off and it shines, but don't melt it. In fact, it is well to serve all new ones the same before putting bees on them. If bees don't readily take to them, remove them and put in known fresh ones. I make my own foundation by the old moulding process, which very seldom is rejected or worked erratically by bees, even after being kept a long time. I have had a lot of experience with other foundation, and of late years have found many erratic combs, bees often building down between the sheets, doubtless through it being stale.

The extraordinary doings of a vagrant swarm under very adverse conditions (E. L. Jenkins, p. 549).—I have occasionally come across similar cases. A cold position facing N.E. does seem strange, but I think it is a case of a hive being in the line of loaded bees, which, being tired probably going home against the wind, alight there with their load, and, receiving a warm welcome, make it their home for life. I have long thought such to be the case, and would like to understand more about it in order to have my own out apiary hives similarly fortunately situated.

A. J. RIDLEY.

Horney Common, Uckfield, Sussex.
November 13, 1922.

A Hornet's Nest.

Hornets have been unusually plentiful this summer in our locality, although wasps have been exceptionally scarce. I observed a queen hornet, a very large and handsome creature, on May 28. This is the time of year when they may be expected, as I see, upon referring to my notes, that it was on June 1, 1919, that I killed a queen. They have not troubled the hives, but they resorted for many weeks to two elm trees growing in the hedgerow of a pasture field. They settle in crevices of the bark and suck the sap. Wasps frequent the same trees, but neither appears to collect wood for the nest from the bark of these trees.

In August one of my cows was stung in two places near the buttock. She probably sat down on a hornet. The result was two large swellings, which, after a fortnight, were lanced by the surgeon, when a bucketful of pus and blood was removed. The cow was not much distressed, and has recovered. The surgeon has known horses to succumb to the sting, but not of any case of a cow being fatally injured, but no doubt a sting in the neck might lead to death by suffocation.

The hornets, when they left the trees, made a bee-line for the church, and we searched for some time unsuccessfully for the nest. I was therefore very glad to hear that at the end of September two nests had been found and taken by a gardener, our local expert, who is always called in to destroy particularly troublesome nests of wasps and hornets, which he does by squirting with a syringe a solution of cyanide of potassium into the nest. One nest was in a hollow beech tree, the other in the thatched roof of a cottage, but this could not be extracted without making a hole in the ceiling, and was left undisturbed.

The nest in the beech tree was removed nearly entire, and was brought to me. It is an oval spheroid, or, to use plain English, egg-shaped, and consisted of six combs arranged in horizontal layers, like a pile of saucers, connected with each other by one or two stout columns or stalks, made of wood pulp, the material of which the whole nest is composed, the comb at the top being suspended by a single stalk.

The top comb is an oval, of which the nar-

row diameter is 3½ inches, and the long diameter 4 1-16th inches at the top. The cells are hexagonal and tapering, being much wider at the mouth than at the base. They are 1 13-16th inches deep, and when occupied with capped brood, they have a hemispherical covering of silk spun by the grub about as large as a marble, so that the cap protrudes, like the capping of a drone cell, for 5-16th inch, making the total depth of the capped cell 1½ inches; but some are not so deep. This top comb contained 104 cells of capped brood. The second comb measured 7¼in. by 6¼in. at the mouth of the cells, and contained about 240 cells; the third and fourth combs were nearly of the same size, and contained, roughly, 500 cells each. The nest then tapered rather sharply, and the remaining two combs, which were damaged, contained about 350 cells, making the total number about 1,700 cells. Five cells at the mouth measured 2in. across, or, in other words, there are 25 cells in 4 square inches.

The top comb was full of capped brood, the second had some young brood and some empty cells with black fæces at the base. The remaining combs contained a great number of capped cells and brood in all stages. Evidently the cells are occupied more than once in the season, and the population of a single colony may amount to a formidable army of, perhaps, 4,000 to 5,000 stings.

The grub is a heavy, dull-white maggot, with a pale-yellow head, and in the early stages lies coiled at the base of the cell like the larva of a bee.

There were no stores of food and no trace of wax. The larva evidently spins the capping, and the cell appears to be coated with a very fine lining of the same silk as the cap. The total depth of the nest is about a foot.

The material of the nest is wood-pulp, light brown, and is in all respects similar to the brown wood-pulp of a wasp's nest. In this district we find two kinds of wood-pulp in wasps' nests, one a light brown, the other a dull, clay-coloured blue. Wasps resort very assiduously to the cleft chestnut palings for some of this material, which may account for the brown pulp, or both may be derived from dead willow wood, which is generally light brown, but, as it decays, moulders to a dull blue-grey tint.

As I write these notes I have a comb before me, and a live hornet has actually emerged from his cell. It has been most interesting to see his powerful jaws at work on the silken dome. I assisted him a trifle with a pair of scissors, and he slowly emerged, first, a pair of horns, then a ferocious head, a thorax with waving forelegs—then a pause, and after a prolonged effort the whole monster emerged, crawled across the comb, and advanced towards me to meet an inglorious fate—imprisonment in an empty tobacco-box. C. F. CLAY.

October 1, 1922. Little Shelford.

Completed Brood Combs.

What one repeatedly observes soons loses any significance it may have, so that probably 95 per cent. of bee-keepers have grown used to working with a maximum of nine and one-half combs, more or less all worker cells, in a ten-frame brood chamber, and think very little of the various losses accumulated in the spaces between the frame bottom bars and where the bees have finished the comb.

The sight of a hive with ten combs solidly filling the frames rouses them at once, immediately most of the advantages are apparent, and the onlooker will ask, "How do you get the bees to work right down on to the bottom bar?"

What are *all* the advantages of solidly built in combs? They are :—

1. More cells for the queen to lay in on each of twenty ovipositing tours, making for an absolutely bigger brood nest, more bees and foragers, more surplus, and relatively increasing the queen's output due to saving her the time, when she is in full lay, of changing from comb to comb, less frequently.

2. More storage space for brood food, pollen and winter provision, honey or sugar syrup.

3. Due to one and two above, a lessened tendency to swarming.

4. Less work in finding the queen, and especially in discovering active virgins—there are no dodge-holes.

5. Less liability in cutting out queen cells, to leave one or more overlooked.

6. The comb is stronger, is not so liable to smash out in manipulation, break down in transport or give way in the extractor.

7. Fewer drones will be reared.

Such combs can be produced without the need of grooved bottom bars and bottom starters in three ways :—

(*a*) With wired-in full sheets of foundation. See that the hive is level and the frame hanging plumb, and nail up the frame square and flat. After the bees have constructed the comb remove the bottom bar temporarily, and set the frame up about three-eighths of an inch on metal ends. When the additional comb has been added cut it to size to fill, with hot knife and a straight edge and replace bottom bar.

(*b*) With combs not wired-in. Be still more particular in levelling the frames and nailing them up square and flat and in seeing that they hang plumb. Fit a starter of foundation, and omit the frame bottom bar. Place thus in the hive, with legs parallel to the hive sides and the frame raised about three-eighths as before. Feed heavily with thin sugar syrup. Preferably do this in a stock headed by a young queen, not over populous and between parallel faces of slabs of emerging brood. Otherwise, drone comb may be built, especially towards the bottom corners. Finish off as before. A1 for brood in an adverse season—like this one.

(*c*) With established unwired combs. In-

stead of renewing these, two or so per year, renew a fifth or a quarter of every comb every year. Remove bottom bar, and using it as a straight edge, cut away about an inch of the comb at the bottom, or up to the brood area, if possible, removing all drone comb. Replace bottom bar; lay down the comb and frame on tapes, then cut the comb up the sides and under the top bar and slide the frame up so that the lower area of frame is filled. Secure the tapes and then with the frame vertical crowd in a piece of worker foundation to fill the, now upper, vacancy. Such new comb will encourage the queen to lay even up to and in the attachment cells, thus spreading the brood, or "stretching the brood" in the safest way.—JAMES B. BALLANTYNE. October 24, 1922.

Hubam Clover.

Lieut.-Col. Kettlewell's letter (10 705) in your issue of October 26 re above has prompted me to send a few notes on Hubam clover and its brother Melilotus Alba. As one who has tried them both—the ordinary in Kent and the Hubam here this year in the S.W. of France—I have found out for myself the difference, which is great. While I farmed in Kent I bought 35 lbs. of seed (all they had) of Melilotus Alba from Sutton & Sons, Reading, and sowed it on two acres of good land in April, and though it grew to 4 feet in height it did not flower up to September, when I cut it for fodder. The field was left unploughed, and the following year the Melilotus roots sprouted well, and by the end of May the plants were over 3 feet high, and covered with blossom.

This year I got 10 lbs. of Hubam seed from Messrs. Burt, Gloucester, treated it with the inoculated culture enclosed, and sowed it on two plots, one being the best soil on my estate and the other being the poorest, being almost pure sand. I sowed them both on the same day in March, and for the first six weeks the one plot looked as well as the other. Then a very dry time set in, and lucerne sown at the same time, and in the next plot to the Hubam, died out, after being 3 inches high, but the drought did not stop the growth of the Hubam, though that on the heavy soil made 50 per cent. more growth than the other. By June 1 both plots started to flower, and by the 15th both fields were a mass of bloom, this continuing till the end of September, when I cut it to save the seed that was then formed. Some of the plants growing at the side were missed in the cutting, and are still in full bloom. I know now that I could easily have had a cutting for hay, and got my seed off the second crop, in this climate at least. As to it being a good honey plant, of that I am fully convinced. During July and August it was very hot and dry here, and nearly everything in the plant line was burnt up, and though we had miles of bell heather surrounding my apiary in full bloom I could not find a cell of heather honey in any of my hives, but newly gathered light honey in every comb, which could have been gathered only off the "Hubam," as, besides the heather, there were no other plants in bloom. It was a sight watching the Hubam in those days, every plant seemed to have a bee on it, and they worked it from daylight till dark. It was also covered by every kind of flying insect; even wasps and hornets of different kinds seemed to be working on it, this being the first time in my life I had seen the wasp or hornet species seemingly gathering nectar off any blossom. Now I reasoned to myself that if one acre of "Hubam" blossom could keep nearly 200 stocks of bees going for two months, which I fully believe it did, it must be "some" honey plant.

I must, however, add that early in September we had ample rain, and when I returned from the conference at Marseilles I found the Hubam being entirely neglected for the late heather or ling, which was in full bloom, and every available cell being filled with heather honey.

I will say, in conclusion, that to all appearance, the seed, leaves and flowers of both Melilotus Alba and Hubam are the same, but the former takes two years to mature and flower, while the Hubam flowers and makes its full growth in one season. I have been often told I had "bees on the brain," but now I have got another disease added, viz., Hubam on the brain. I have saved 150 lbs. of seed from those two plots, and intend sowing it on every available corner of my little estate next year.

WM. WILSON.

Lot et Garonne, France.

A Yorkshire Optimist.

It's a faint heart that never wins a fair lady.

It is a long time since I penned a few lines for our little paper, the "B.B.J." On taking it up this week and reading the notes of Ashdown Forest I thought how some people are discouraged, and I must refer to the above heading. Now, Mr. Ridley, cheer up and have a good heart; we bee-keepers must not be knocked out of time with one bad season. I have known a worse season - that was in 1888. My bees cost me in that year a fair sum of £ s. d., but the year following was a bumper; in fact, I made more money in 1889 than ever I made in one year since. Then why be discouraged ? I would rather struggle with my bees in a bad season than struggle with them in a good season, fighting the "Isle of Wight" disease. I have received much joy and pleasure this year in feeding my bees. I am always happy when I am amongst them. Some bee-keepers are never content unless the bees are bringing in 25 per cent. The joy and pleasure that they give to one pays off a good debt. My bees have cost me £11 in sugar this season, and I am happy. I find that bee keeping is like many indus-

tries, there are drones that are never killed off; the stocks remain queenless and without any hope. I never had a finer lot of bees go into winter quarters than I have at present, all sufficient stores to see them well through the winter, all packed down and made snug, and I am looking to be paid tenfold for my labour. I have never had the feeders off my hives since midsummer; I kept them going all through the bad weather, and all are now boiling over in bees. What joy and pleasure it gives to a true beeman! All bees should be fed up long before now, as it is too late now for syrup feeding for them to seal it over. I have had no trouble with syrup not being capped (*re* 10702, p. 501); the reason for syrup not being capped is the bees have not been liberally fed, consequently they have nothing to cap. Cheer up, Mr. Ridley, and give us better news in your next "Jottings."—E. J. THOMPSON, The Apiary, Gowdall, Snaith, October 13, 1922.

North Cheshire Chat.

The exceptionally mild weather we have had this last week will mean a rapid consumption of stores. Those who have candy over feed-holes will do well to have a peep to see if it wants replenishing. Undoubtedly the better plan in giving candy is to give a dozen pounds or so at once, but the cottager cannot always do this, especially if he has four or five hives to be fed, as he cannot conveniently afford the expense all at once out of his not too opulent income, so, perforce, has to feed in driblets of a couple of pounds or so at a time. In a good season candy feeding during the winter ought not to be necessary; sufficient honey ought to be left in the hives. I am inclined to think, with Mr. Simmins, that candy during winter tends to keep the bees too excited, and that the best use it can be put to is stimulative feeding in the spring. However, after such a season as last summer, we have to do what we can, not only what we would like to.

Re a recent Editorial on climate and the colour of bees, one has noticed how quickly Italians seem to lose their distinctive colour and become more and more like our native bees each generation. Is it not possible that bees should really show signs of producing new species during the lifetime of man, even if only transported to new environment and left to natural selection? Man produces about three generations in a century, and in a little more than that period has almost produced a new race, or races; I refer to the inhabitants of the Western Hemisphere, who, though so largely of European origin, in their new environment have developed marked characteristics in about seven or eight generations. Bees would easily produce a hundred generations in half the time it takes man to produce six. Any variation would quickly become fixed. Following this line of reasoning, could not the mite which causes Acarine disease have been evolved from a species that originally had nothing to do with *Apis mellifica*, but whose first acquaintance was accidental, and finding the new environment congenial, developed into an individual that could not exist apart from its host, within the last twenty years or so? It would have had time to go through hundreds of generations in that period. The same argument might be applied to diseases caused by bacteria. I am not a scientist, so cannot experiment along these lines. We are told "like breeds like," but also that in the course of ages new types have been evolved. So to the mind of a layman it does not seem impossible that in the course of a lifetime (of man) many new species of bacteria may be evolved, as I understand many of them can produce two or three generations an hour. At that rate they should be able to change as much in a year as the higher forms of life in tens of thousands of years, so that when we hear of a new microbe being isolated, it would seem probable that it is really new, and not just the discovery of one which was always present but unnoticed. We have two kinds of foul brood, and a disease called sour brood. Cannot these all have had a common origin, and may not that origin have been from some very simple form of bacteria that grows freely on almost all decaying matter? We have had no notes from the Southern Midlands this year. How has the season been in Oxon, Berks and Bucks? Mr. Hancox, of Deddington, used to send some notes. If he is still alive and able, one would like to hear of the seasonal results of one's native county.

D. J. HEMMING.

Appleton, Warrington.
December 2, 1922.

Introducing a Queen.

The text-books of bee-keeping generally inform us that the queen has a sting, but uses it only against a rival. Anyone who has kept bees for some years must have noticed that there are times when bees take it into their heads to do something entirely different to what the text-books tell us we might expect them to do.

In my little apiary I was raising some Italian queens. The weather at the time was very bad, and robbing of the nucleus hives became so serious that one of them was entirely wiped out. The other was being so savagely attacked that I decided to take the queen at once and give her to a larger colony. I was quite unprepared for it, and, in fact, had to make a large swarm to give her to. I put her in a cage, one of the large flat sort, with a glass cover. I wanted some workers to put with her, to feed her, but as defenders and robbers were so thoroughly mixed up I left them alone, and swept half-a-dozen workers off the first alighting board I came to into the cage with the queen. I placed the cage, with its glass cover on, over the feed hole, and watched for developments. I expected the queen to be killed immediately, and you can imagine my surprise, for when the first worker

attacked the queen she retaliated so vigorously that the worker soon got the worst of it. The queen's superior size and weight quickly told; she gave the worker what I suppose would be the bee-keeping equivalent of a left-hook to the jaw; it went down on the floor, and was promptly counted out.

The queen walked round in a most dignified manner, and after a little hesitation on the part of the workers, round No. 2 commenced. The worker jabbed furiously, but it was no good. Her majesty's footwork was too clever for it, and No. 2 measured its length on the floor, having been knocked out in something less than ten seconds. I am sorry I could not spare the time to see the end of the fight, but the next morning there were five dead workers in the cage, and one very humble, rather sickly-looking survivor. The queen stalked round with evident dignity. I never saw one look more fit. Why they did not all come on at once, as bees generally do, I cannot imagine. The queen was accepted by the colony, as she well deserved to be.

L. BERNARD GLASSPOLE.

Leighton Buzzard, Beds.

CORRESPONDENCE

Degeneration in Bees.

[10723] While agreeing with Mr. Hemming on all the points he raises as regards in-breeding in animals, I am still at fault as to applying the same rule to the bee. So far as I know, both sexes in animals are only produced when male and female mate. That is, the life germ in both cases comes from the male, and therefore both sexes from one mother and father are blood relations in the true sense. Now, long experience has proved that to breed from such relations is fatal to the stamina of the offspring. This, I think, is the real reason that so many speak of in-breeding being the cause of recent outbreak among bees.

But will facts bear out such a reasoning?

It is admitted without dispute that only the female (I am referring to bees) offspring receive or require the serum of the male, the queen being self-fertile as regards the drone. This being so, I take it that there is no blood relationship between the two sexes produced from one mother, and so in-breeding in the sense we generally use the term cannot take place.

However, even if we grant (for the sake of argument) that relationship between drone and queen from the same mother is not desirable, how often does it take place? Drones taking their flight or pursuing a queen may, and no doubt do, enter hives at a long distance from their parent hive, and in a very few days might travel a considerable distance. Then, again, how far do drones fly, and how far queens when out for mating? I heard the late Mr. Sladen once say that although, so far as he could ascertain, the nearest blacks to Ripple Court were eight miles distant, yet he was never certain his yellow queens had not met black drones until he had tested them by observing their offspring. This goes to show that large distances are covered.

I think I have put forward enough to at least cause an inquiry into the matter before it is assumed that Mother Nature has erred.

By the way, it would be interesting if some of our scientists would search for and find (1) the life germ, (2) how it becomes active in the drone egg. G. JAMES FLASHMAN.

Comb Built in a Tree.

[10724] In the *B.B.J.* for October 5 a correspondent mentioned an instance of a swarm remaining as a cluster for 26 days. An instance occurred here this summer of a swarm

COMBS BUILT IN APPLE TREE.

remaining in a cluster on an apple tree for 34 days. When it had flown it was found that the bees had built 5 combs—all worker cells. There was no honey or pollen in the cells. I took a photograph of the combs, and I enclose a copy herewith. The cells are easily visible through a magnifier. J. L. B.

The Question of In-Breeding.

[10725] In "A Dorset Yarn," THE BRITISH BEE JOURNAL, November 16, Mr. Kettle writes of mustard being "of enormous value for nectar," and of bees leaving everything else to visit it. How I wish that his experience was mine. Unfortunately, it is far otherwise, for, in spite of fields one blaze of yellow, not a single bee have I seen on the flowers. Presumably, the difference is one of soil, and it would be interesting if other bee-keepers would write and give their experience with regard to mustard, stating the kind of soil on which the crop was grown. Near my apiaries the soil is poor, with much chalk. In the same number Mr. G. J.

Flashman raises many questions with regard to in-breeding. Personally, I think the ill-effects resulting from in-breeding are largely imaginary—at any rate, so far as bees are concerned. The following is a copy of an article which appeared in "The Farmers' Union Advocate," New Zealand, a few years back: "More than 25,000 guinea-pigs have been reared by the United States Bureau of Animal Industry on one of its experimental farms to test the effects of in-breeding. Brother and sister have been mated in each generation, and some of the families have reached the seventeenth generation. While a few strains have run out, others are nearly as vigorous as the control families. But the important fact is that there is no general deterioration; the various defects which have appeared are not co-related. One family becomes strong in one respect and weak in another; in a second, family conditions are exactly the reverse. *Such a state of affairs does not lend any support to the popular idea that in-breeding necessarily produces degeneracy.* The various kinds of deterioration are to be accounted for in different ways. In general, the belief of scientists is apparently confirmed, that even long-continued in-breeding does not necessarily mean deterioration. It tends to make the members of a family more alike, and to perpetuate all variations that occur. If the strain is a good one, in-breeding will improve it; if it is a weak or defective one, in-breeding will bring the defects into prominence, and probably lead to the elimination of the strain."

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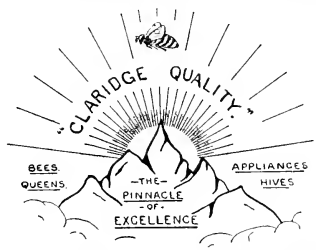

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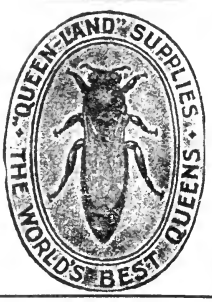

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RONALD HARVEY, The Apiarist, ANDOVER.

The Bee-Keepers' Calendar.

DECEMBER, 1922.

14 Thursday. "Beautiful, eager he wooed her, and kissed off her tears as he hovered,
Roving at will, as a bee, on the brows of a rock nymph-haunted,
Garlanded over with vine, and acanthus, and clambering roses,
Cool in the fierce still noon where streams glance clear in the mossbeds,
Hums on from blossom to blossom, and mingles the sweets as he tastes them."—*Kingsley, "Andromeda."*

15 Friday. "For birds were warbling round, and bees were heard about the flowers."—*W. C. Bryant, "After a Tempest."*

16 Saturday. "The birds rejoice in leafy bowers,
The bees hum round the breathing flowers."
Burns, "Logan Braes."

17 Sunday. "And every moth and bee
Approach me reverently,
Wheeling o'er me, wheeling o'er me,
Coronals of motioned glory."
E. B. Browning, "A Lay of the Early Rose."

18 Monday. "What! you're a sunflower? How I shall miss you
When you're grown golden and high!
But I shall send all the bees up to kiss you;
Little brown brother, good-bye."—*Baby Seed-song."*

19 Tuesday. "And to thy mountain chalet come,
And lie beside its door,
And hear the wild bees' Alpine hum,
And thy sad tranquil lore."—"*Matthew Arnold.*

20 Wednesday. "Into the middle, be the water still
Or flowing free, cast willow-logs cross-wise,
And massy boulders that no saving bridge
May fail them for the spreading of their wings
To summer suns, if Eurus, as they pause,
Have damped or plunged them head long in the tide."
Virgil, Georgics, Book IV.

Obituary Notice.

MR. SQUIRE H. TOMLINSON.

We were sorry to hear of the death of Mr. Tomlinson, of Wimborne, Dorset, on Monday, December 4. Mr. Tomlinson was riding a motor cycle when he came into collision with another motor vehicle at a crossroads near his home, receiving fatal injuries. Our esteemed correspondent, Mr. J. J. Kettle, has often mentioned Squire Tomlinson in his yarns, so his name will be familiar to our readers. He was about 60 years of age, and was, as will be gathered from Mr. Kettle's tribute printed below, a keen bee-keeper.

MR. TOMLINSON'S DEATH.

"We can only have the highest happiness by having wide thoughts and much feeling for the rest of the world."—*George Eliot.*

We who stood round the last resting place of Mr. Tomlinson in Wimborne Cemetery could not help but think that he had the highest happiness in life, as he had ministered to the happiness of so many, for as one of the local advisers he had been to so many of the members and helped them with the surplus racks of honey. No distance was too far for him; if a bee-keeper wanted help he never failed him. His last journey was to the Violet Farm, when close to his home on the return he was fatally hurt with a motor at a dangerous crossroad. He was an excellent bee-keeper, was most successful with surplus honey; among other hobbies he was a clever photographer, and had got the art of finishing the work so that it always kept colour; only a week or two since he sat for another examination in bee-keeping with a good heart that he would win through. He had bought expensive books to read up; he cared most to be termed a practical bee-keeper rather than an expert, though he was an expert in handling them. He was a successful exhibitor in Dorset and Hants, and was one of the executive for Dorset. A successful business man who came South some twelve years since, he had a great love for bees, and happiness and pleasure in helping others.—J. J. KETTLE.

A Dorset Yarn.

"Will bees give me a regular income?"

This was the query in a letter from a bee-keeper where twenty-five factory chimneys could be counted from his homestead; not a very bright outlook for bees and flowers, but he has always had some honey, some seasons quite a good lot. So many never see the quiet natural beauty of some of the rural districts of our own loved land. These are the places where the bee-keeper can have plenty of surplus honey. One who paid a visit to the farm assured me he never went into honey trade; he was always raising and selling nuclei and queens. This had always been a regular means of income. He had sold in one season 156 queens. There is a great deal in front of young bee-keepers. "What man has done, man can do." We go in for honey production, but though we get a great deal, to raise queens by the hundred, with a ready sale for them, must be a better paying proposition than keeping bees for honey production. When at a farm sale, one lady from the Swanage area told me that the best blend of honey she ever had was from apple and hawthorn. I cannot tell how she should know, as so few of us are clever enough to know how to differentiate. Mr. Watts, of Weymouth, at the same sale, told me he had a heavy lot at the beginning of the season, and not a full section after. He has always been good with Italians, and when in this area he used to put an extra box entirely over the hive, this was to keep them warm and dry for winter. Another lady is enthusiastic about bees. She wants me to read a clever treatise written by a college friend; am looking forward to receiving same. All this was at one farm sale. There must be a good many bee-keepers and readers of bee literature if there were so many at one gathering of the farming community.

Not one of the bee-keepers in Dorset will admit that they get a living entirely with bees. One tells me that his bees and his fruit give him £350 a year. He lives in a good district for fruit and bees. He always worked his for extracted honey, produced very few sections. His time was limited, and he found it best to put the queen down in a new brood-box in May, putting a queen excluder over this, and the old brood-box on the top, adding other surplus boxes of standards as they were needed. Most of them say bees and poultry will give a good return for money invested. Poultry houses run into a lot of money. A small one, with glass front only 20 feet long, cost me £30. A bee-keeper of limited means could not have many like that; but we spend many thousands sterling a month on foreign honey, and in the millions on foreign eggs throughout the year. Bees depend on weather. They cannot work in the wet; it must be dry; yet if it is a prolonged drought, the flowers of many bee plants do not contain the nectar; it seems to be used up in the development of the seed organs. When the bees get there the flowers are bare, as the

"cupboard was bare" in the old story of Mother Hubbard. This season has not been one of the best, though we have made more with the bees this year than last; but, then, this year the expenses have not been much, only a case of sections and a gross of standard bars. The latter are all used, but not the sections. Nearly all the 3½ gross of bottles are sold. A living from honey must be an average of years. These clever ones who raise queens and nuclei for sale may have a regular income from bees, but most of them do other things beside bees. Combining other things with bee-keeping, one gets more pleasure out of life. We have kept pure-bred fowls, but have found that crosses give us the most eggs. We have pedigree pigs, but we find the mongrel-bred give us the most young at one time We combine all rural means of production; we find it all adds to the farm's interest, and is helping the nation's home food account. We would advise those who seek a rural life to combine bees with other industries. Those who want a happy life can get a living in rural England; they need not go to other countries.

Another writer wants to know the value of her stocks of bees, as she is leaving her holding, and the incoming tenant wants to take them over. I advised her to apply to the local bee association. They would be better able to advise her as to value; this is very difficult to do when one has never seen them. I have to move a lot of mine; some are swarms in boxes. I asked 20s. each if they had them in autumn; if they wanted them in March and April they would be worth as much again, as often when one has only two one will probably rob out the other. The buyers took the risk, and I can send them to their farm at my convenience; but to value what one has never seen is beyond me; some hives might be worth more than the bees that were in them, some Italian stocks, very strong, would be good value, and they may be in a poor hive.

I have to value a holding next week; both the outgoing and incoming tenants have asked me to do this. Bees, lines of trees, apples, pears and plums, plantations of strawberries, bush fruits and rasps—these bees I can see; but this lady bee-keeper who lives many miles away must be advised by her local advisers in that county.

J. J. KETTLE.

Jottings from Huntingdonshire

In-breeding as generally understood, to put the matter into a nut-shell, is breeding in a predisposition to disease or fixing some abnormality; out-breeding is breeding out undesirable qualities. I am glad to see the Editorial Comments in last week's THE BRITISH BEE JOURNAL, and venture to hope that the last has not been heard on this subject. Meanwhile, I am tempted to offer a few observations. In the first place, we will remember that solitary bees and wasps do not quite follow the economy of the honey bee. The queens of the honey bees depend upon their progeny for existence the whole year through, being unable to hibernate under thatch or in some sheltered spot until the spring's awakening, nor are they able to make preliminary arrangements for the dwelling places of their descendants; moreover, when an epidemic practically clears a district of wasps there is rejoicing; a similar thing happening to the honey bees causes sorrow. While there is doubtless much to be said against the importation of foreign bees, we must remember—if my correspondence is anything to go by—that but for the foreign queens, many bee-keepers would have been well-nigh ruined. One letter I have received from a worthy bee-keeper tells how of 280 stocks of native bees not one survived the ravages of disease, and but for the timely arrival of two Italian queens, he would have nothing to console him but empty hives.

Mr. Flashman is of the opinion it is man who is wrong. Possibly! But if so, he is wrong in adopting bar frame hives, cutting out queen cells, preventing swarming, using weed foundation. If left to Nature, the honey bees would get on very nicely without these things. The fact is, we want to keep bees for profit as well as pleasure, therefore we must control Nature, and if controlling Nature results in an unforeseen terror showing itself, we have got to find out how to keep that terror at bay. My grape vines grow profusely, but I know that unless I adopt certain measures to check the prolificacy of Nature, my grape harvest will be small. I also know if I leave my bees to Nature, my honey harvest will be nil.

Mr. Flashman also raises a very interesting point *re* the male and female in bees. He states that the queen bee is self-fertile as regards the drone. So far true; but at the risk of being metaphysical we must not overlook the following fact: no queen could be self-fertile as regards the drone if she herself were not the offspring of a mating between a drone and a virgin queen. We will suppose B to be a virgin queen the offspring of queen A, which had mated with a drone whose mother we will call D. B goes on her mating flight and mates with a drone also the offspring of D—is this, or is it not, in-breeding? Does this ever happen? In my opinion, often, of which more anon. I am grateful to Mr. Flashman for stating drones fly a long distance from their parent hive. One correspondent has filled a sheet of foolscap in trying to prove to me that drones never lose sight of their hives. I wonder what, in the opinion of my correspondent, happens when a swarm decamps and domiciles itself a mile or so from its original home?

E. F. HEMMING, Steeple Gidding.

Week-End Bee-Keeping.

By S. H. Smith, Cambridge.

(*Continued from page* 592.)

D. B. and I had only time to glare at each other when George came, bringing a dish for which the "Crowing Hen" is famous. With a graceful gesture he placed before us a covered silver platter and then stood at attention. A couple of under-waiters slid hot plates in front of us and flanked these with silver sauce boats containing a garnet-coloured jelly.

George bowed, removed the cover and revealed six baby-lamb cutlets reposing on a bed of parsley. George bowed again, brushed an imaginary crumb off the spotless damask table-cloth, lovingly caressed the decanter as he re-filled our glasses, waved deprecatory hands in acknowledgment to our compliments, then faded out of sight.

At the first glance at that dish I knew what was coming and, sliding a little deeper in my chair, I released surreptitiously a couple of buttons from their predestined functions. Followed a few moments of silent appreciation. When I looked up again, D. B. was smiling. "Go on with your yarn, old man," I cooed. "I am sorry if my remarks disconcerted you."

"What I wanted you to grasp, Week-End, is that my chicken complex is a peculiar one. If I don't see a whole chicken in front of me when chicken is being served, I break out in a profuse nervous perspiration and become quite faint. This makes it exceedingly embarrassing when the wife and I dine out. You would class it as a war-neurosis, no doubt. But I put it down to the Malta hospital treatment."

"These cases are not so peculiar, D. B., and did not originate with the war. The Freudian explanation would be that some desire has been suppressed in early youth. But as your case only dates back to that hospital experience, it comes under a different category. Now, if you had been number six in a family of eight, you might have developed the chicken-complex symptoms sooner in life. My childhood recollections of chicken, served in any style, run to pope noses, necks, gizzards and other undesirable portions. In those Victorian days no audible protests were allowed at meals. But I've lived to avenge myself. There is something in that, dear boy. Maybe, if you had kissed that nurse, she might have brought you a chunk of real chicken meat."

"Ancient history won't help me."

"Naturally, you have tried everything possible. It would be awkward to carry a whole cooked fowl, concealed more or less in your pocket, to a dinner-party. There's the thirty-day cure? Why, you eat a whole chicken for dinner on thirty consecutive days. No? Well, then—have you tried symbolism?

"You work a Coué stunt. Provide yourself with some neatly made, innocuous bread pills, and as you swallow one you repeat to yourself, *sotto voce*, of course, I have swallowed a whole chicken, I have swallowed——"

"All right. But I don't see how we are to get any forwarder unless we discuss ways and means. You could carry a photo of the desired object in the back of your watch."

"Thanks. Yes, if it all the same to you, I'd prefer an ice to a savoury. Agreed. Coffee and cigars in the lounge listens good to me."

By three o'clock we were in the apiary. Things had been prepared some days ahead, and on unlocking the workshop door, I introduced D. B. to a table covered with empty lime-juice bottles. A pail under the table held a couple of gallons of beer, now turned sour and proclaiming the fact loudly.

"A waste of good beer? Wait and see what it can do. The formula is a very simple one. One part, by measure, of sugar, four parts of beer and four of water. As there are about thirty bottles to fill, we prepare the dope in a wholesale way by mixing all the ingredients in a pail. We'll use this pint measure as the unit, stir up the fluid with a stick until the sugar is dissolved, then this funnel and the measure will enable us to quickly fill the bottles. A pint goes into each quart bottle."

"Good. It will be easier work to carry the pails and bottles to the hives and to fill them there. We set a bottle about one foot away from the edge of the alighting board, directly in front of the entrance. Our traps work this way: The sun warms up the fermenting liquour and the rising fumes attract wasps, but not bees. No wasps can resist the intoxicating odours, and they fall easy victims. Once a wasp enters the bottle, it will never come out again alive."

"Yes, there are comparatively few wasps about this year, but they are great searchers and cover lots of ground. If they once get on the trail of a weak bee stock they will materialise from all quarters and do it in, if the bee-keeper is not there to frustrate them. They are early risers, too, up hours before the bees, and they go to bed much later. In an ordinary season I should have put out these bottle traps weeks ahead of this."

"Usually, the bottles will be ready for emptying in about fifteen days, by which time they will be filled to the necks with dead wasps. These need not be wasted, as chickens will eat the carcases greedily."

"There. Every stock has its wasp trap, and already wasps are falling to the bait. The only thing to guard against is that the bottles are not knocked over. In an apiary where chickens, ducks, cats and dogs run loose, you would have to embed the bottles a couple of inches deep in the soil."

"If you have no pressing engagement, D. B., what do you say to doing in a few wasp nests? I have marked down for destruction six that are within a quarter of a mile of the apiary. Good. We will prepare the poison-gas at once."

"The cyanide is kept locked up, of course. There is an ounce in this bottle. It is generally sold in lumps like these, white, opaque, amorphous and harmless-looking but the extremely potent and dangerous hydrocyanic acid is easily released."

"The label reads NaCN, Sodium Cyanide, because KCN, Potassium Cyanide, became scarce and expensive during the war. The sodium salt is not only cheaper, but more stable, and weight for weight it evolves more hydrocyanic acid. It has therefore replaced the potassium salt almost universally in the arts and industries."

(To be continued.)

Notes from Gretna Green.

CURRENT TOPICS.

The tendency of swarms to seek pastures new, and of queens to find mates from outside apiaries, may be taken as conclusive proof that "the spirit of the hive" does recognise the danger of in-breeding. As regards the conflicting claims of foreign v. native bees, those who are interested in the sale of Carniolan, Dutch or Italian stock, naturally extol their own speciality and decry all others, but unite in condemnation of our native British bee. Extremists on the other side are equally positive that all alien bees should be deported forthwith. So far as honey production is concerned, who can say which bee is best under all possible conditions? In the hot summer of 1921, a Golden Italian was decidedly my best and most profitable colony, but during the past sunless summer Goldens did very little and Dutch bees took the lead as regards surplus honey.

Should the coming summer prove warm and sunny, the positions might again be reversed.

Disease resistance is not a monopoly of any particular race. Neither is any specified variety, not even our own native bee, predestined to extinction by Isle of Wight disease.

Any colony, of any variety, will be resistant if the individual bees composing it are the progeny of virile parents, but there is no certainty that resistant stock can be reared from the queen of an apparently immune colony.

My own experience goes to show that strain or race is of relatively little importance compared with the all-important matter of how our queens are reared; and close observation on how a badly diseased colony regenerated itself by deposing their queen and rearing another under the supersedure impulse showed clearly how, even with upromising material, the tendency to acquire Isle of Wight disease can be, and is, bred out.

Apropos of recent comments on apicultural lore served up by the non-technical press, it must be said that equally surprising matter has appeared in contemporary bee papers as well.

Some writers, in fact, would appear to have sought inspiration from "Gulliver's Travels."

The Laputans, it will be remembered, had a lofty disregard for common-sense, but made a feature of doing everything in a scientific way, and in building their houses they began at the top, thence working downward, just like our friend the honey bee. The "scientific" bee-keeper, in his turn, also begins at the top by piling on all possible overhead charges in the shape of costly fads and elaborate equipment that, if generally adopted, would make our craft simply and solely a sport for millionaires.

It is not taking a sordid view of our craft to insist that bees should be made to pay their way, and those that think or say otherwise are faddists who will not last long on the absence of outside support.

After all, common-sense indicates that if our apiaries are over-capitalised by unnecessary outlays, the pleasures of bee-keeping may remain, but the profits will be conspicuous by their absence.

J. M. ELLIS.

Questions, Please?

My experience of lecturing at bee shows and exhibitions of fruits and flowers is neither so extensive nor so varied as that of many of the readers of, and contributors to, this journal, but it has been extensive enough to have turned me into a student of human nature—an apicultural psychologist—if I may be allowed to coin a phrase.

Human nature will out, even from the spectators, interested or otherwise, standing round a bee-tent.

Everyone knows that the bee-lecturer stands in no "coward's castle." He makes his statements, well knowing that the audience around him is there, not only to learn, but also to criticise, if need be, adversely. And at the end of his talk he invites questions. Mind, I said "questions," not "criticism." The latter, however, is what he often gets, sometimes thinly veiled under the form of a question.

And questioners are many, and types of questioners almost as many. To enumerate a few. There is the complete novice, interested for the first time in his life in bee-keeping. He shyly asks for some simple little bit of information that often the interested and intelligent child could supply. Such a one should be treated intelligently and sympathetically. He is the future bee-keeper, the one who will carry on when the older generation is dead and gone. Treat him kindly; whet his appetite for information and put the secretary on his track.

Often, in the crowd, there will be an acquaintance. He may just for fun put a poser or two, or, if questions come slowly, fill the gap for a short time by supplying them. Or he may put in a really helpful query, designed purposely to enable the lecturer to supply some little information that he may have passed over in his talk, or

framed in order to get the lecturer to elucidate more fully some point in his speech. Such questions are always interesting, and, to me, most helpful. Then there is the budding bee-keeper, the one who has kept bees for a few months and is most enthusiastic, but lamentably ignorant. Ignorant, however, with the full knowledge of his own ignorance, and only anxious to obtain as much help as possible. We have all been in that state.

But the particular *bête noire* of all lecturers is the one who knew it all before the speaker's grandfather was born. He asks questions, not for the purpose of seeking information, or of helping the lecturer, but merely to show the crowd what an idiot has been put up to talk, and how much better it would be had he himself been providing the speech. A civil answer is wasted upon him. More likely than not, when he receives it, he will put in a flat contradiction or try to commence an argument aiming to show his own superiority and the absolute imbecility of the lecturer.

What is to be done with such a one? These lines will never meet his eye, for he has no need, and never has had need of the *B.B.J.*, being so far superior that even this journal can teach him nothing. My own method is to answer as civilly as possible, to try to ignore the thinly-veiled assumption of superiority, and to leave the judgment to the audience. Luckily, given enough rope, such a questioner will speedily hang himself in it, and then can be dealt with accordingly. What steps do other lecturers take?—D. Wilson.

A Cotswold Gem.

Truly there is one gem among the delightfully situated hamlets of the Cotswold uplands. By common consent it is fully worthy of its title. Esconced partly on the hillside or "bank," the village runs down and away along a pleasant valley, wherein winds the Colne—a clear stream with a gravel bed across which are old stone bridges of quaint design.

The first glimpse arouses one's expectation. Seen from the vantage ground of the high road in the softer sunlight of October, when the foliage is changing colour and the way is strewn with rustling leaves, an enchanting view meets the eye.

Quaint houses peep between clusters of trees with gardens and rickyards, while away beyond the deep brown lines of ploughed land stand in vivid contrast to the grey-green meadows, or greyer stubble with long lines of sheaves still waiting to be carried.

In a Cotswold Garden.

Unmistakably prominent is the manor—a long, half-timbered residence with gables and a roof grey with age.

And the garden—a description can hardly do justice to this.

Nearby stands the church, well preserved and stately, a testimony to the honest craftsmen of former days.

A winding and precipitous by-road leads to the church, about which, amongst other things, are roses in neatly-kept beds.

Indeed, the virtue of cleanliness is fully appreciated by the villagers, and it would be difficult to find a place where the atmosphere of content is so prevalent.

The lanes are tidy and the walks neatly kept.

The gardens are aflame with old-fashioned flowers, and stone-slab paths lead to the village homes.

Not many bee hives were in evidence. Perhaps they have been lost through disease, or else not kept at all.

In any case these bright gardens are incomplete without the row of hives under the wall.

Hard by the village street the stream wends its way, rippling over a stony bed, or through the mossy strands in which the fish love to hide.

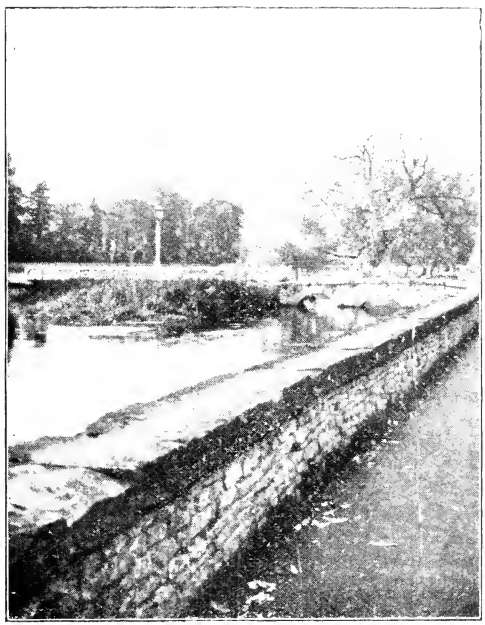
But nowadays in the hamlet the garage has come into prominence, and with it the signs of "Shell," "Gargoyle" and grease.

"Ah," quoth the lover of horseflesh, "'tis a sad case."

As the tractor replaces the team and the motor replaces the horse-drawn vehicle, there is less for strong, willing hands to do on the land.

But, happily, in natural beauty Bibury—and here my secret is out—remains unchanged, and the delightful pen pictures by the late Arthur Gibbs in "A Cotswold Village" can still be seen by the visitor.

And artists find much to sketch and paint



A Cotswold Gem.

In the deeper pools the dark surface reflects the overhanging pollard and withy, and the tall reeds rustle in the breeze. The followers of Isaak Walton find ample sport and when the May fly is up the trout are at their best.

Angling is a priceless excuse for laziness, and the keen Cotswold air is calculated to enable the sportsman to do ample justice to such wholesome fare as is provided at the local hostelry.

Unhappily, times have a knack of changing, though they are not welcomed by local celebrities. Twenty years ago the sound of the anvil was unceasing, and as much news changed hands at the smithy as anywhere else in the neighbourhood.

and linger over during the long summer days.

Away over the stream lies Arlington, with many a crooked patch and rustic cottage.

It is easily reached by road from Cheltenham, Cirencester, or Fairford.

Taking the London Road from Cheltenham, you turn right at Hangman's Stone beyond Puesdown Inn, skirting the plantation until open country is reached. Here a wide rolling country is traversed, dotted with farmsteads and plantations. Here, in the hunting season, there is a many a chase and much excitement afforded when the pack in full strength passes that way.

A. H. Bowen.

Notes on the Method of Collection of Propolis Adopted by the Honey-Bee.

Having been impressed by Sladen's observations on the method of collection of propolis by the honey-bee ("How Pollen is Collected by the Honey-Bee and Bumble-Bee") I set myself to discover more exactly the process by which the propolis is passed from the bee's jaws to the corbicula.

Sladen's remarks led me to believe that the claws at the end of the tarsus played an important part in effecting the transfer of the propolis, but throughout my observations I have not once seen a bee use its claws at any stage of the operation, the transfer, in fact, taking place through the medium of the brushes, as does that of the pollen.

The bee, having scraped or bitten off a small quantity of propolis with its mandibles, raises its head and places its two front legs together, with the brushes against the posterior aspect of the widely opened jaws. A quick downward movement of the palmæ along the edges of the jaws then transfers the propolis, more or less moistened with saliva, to the anterior bristles of the palmæ brushes. The front leg is then bent backwards under the body, and the middle leg on the same side is brought forward until the joint between the planta and the tibia is over the same joint on the front leg, and in such a position that the planta, when bent on the tibia, passes round the anterior edge of, and brings its brush into intimate contact with, that of the palma. The withdrawal of the front leg from this embrace, coupled with a downward movement of the middle leg, then scrapes the propolis off the palmæ brush on to the downward pointing bristles of the brush of the planta. The bee then presses the planta of the middle leg over the corbicula, and by drawing it slightly forward and upwards scrapes the propolis off the brush by means of the bristles on the anterior edge of the corbicula, thus leaving it pressed against these bristles on the floor of the corbicula. It is this last action that Sladen seems to have believed to have been one of adjustment only and has described as a pat, but careful observation will reveal the fact that there is always a slight forward stroking movement accompanying it, and that although it may be used from time to time for adjustment of the load only, it is primarily the method of transfer of the propolis from the middle to the hind legs.

The method of loading up accounts for the fact that the forward portion of the lump of propolis in the corbicula is always more compact and rounded than the rear portion.

The movements in loading-up do not seem to be regularly alternate, as I have often seen a bee place several particles of propolis in succession in the corbicula of the same side, thus producing a somewhat unbalanced load. The side on which the propolis is to be loaded is decided after the bee has removed it from the jaws on to the brushes of the palmæ, it then all being transferred to the right brush by a downward scraping movement of the right on the left brush or vice versa.

My observations have all been made on the race of *Apis mellifica*, native to this country (Kenya Colony), which in appearance is very like a cross between the Italian and Black bees, and on bees collecting old propolis which was somewhat hard and dry, so the process might vary in different circumstances. In any case, the movements of the limbs of the bee are so rapid as to make correct observation of the more minute details of those movements exceedingly difficult.

GEOFFRY R. PEMBRIDGE.

Kenya Colony.

Jottings.

Dr. Bonney's Colour Theory.—I should like to endorse and relate an experience I had this year. Some time ago I mentioned a curious swarm from a three-frame nucleus, no doubt caused by the lean season, unless the queens were pretty good pals, and decided to share subjects, if not the castle. These queens were supposed to be purely mated, but were different in colour. I sent the brightest away, and the gentleman claimed she was mis-mated. I tried to compensate him, but the dark queen produced bees true to markings required. I have noticed, too, all my Italians were darker this year, or not nearly so bright as in the spring. This goes to prove that drones must have an equal, if not predominant, power of reproducing their particular kind. Also, as this is practically their entire function, may we not claim this as going a bit farther than mere disposition. This also endorses article 10716, page 561, from another point of view.

I paid a visit to the site of the old Ripple Court Apiary to-day, but nothing remained but the trees provided for a wind-screen, as the coast here gets a breeze or two on sometimes. I got into conversation with a hand on the splendid farm, who said the place was going to ruin as the new mine owners would only allow a yearly tenancy. "Produce down, rents up and up. How can one pay if there is nothing to pay with?" Surely where double sources of wealth are secured, the country and humanity should not be penalised in this fashion. The labourers need food and clothing; "they fought and won"—at least, so we are told. A mile or two away, hundreds of acres set aside for golf. We like sport, but this is not the game. On every side we read we need more "production." Apparently it means of a right spirit among us. Labour will not be denied. Let us hope it wins peace.

A. H. HAMSHAR.

Notes from the Shadows of Brecon Beacons.

The season has been very disappointing in this district. The opening months of the spring gave great promises. Honey was carried very plentifully, then the cold, wet weather came, and still continues, and the contents of one or two supers that were not capped was taken down to the brood boxes. This is the worst honey season since 1912.

We are waiting patiently for the declaration of the specific to check the ravages of the bee-pest. We are told by the experts that such a remedy has been found, but all the tests have not been completed. Well, it is very disappointing if we are obliged to close the stocks down knowing they harbour the destructive mite, and a high percentage of them will go under during winter. What is to be done with strong stocks that have a bundle of bees on the ground about the size of an egg any flying day? That is the case with many of us. We should like to get the "cure" published or some advice offered us how to deal with stocks in this condition before we close them down for winter.

[We are sorry we can give no specific for Acarine disease. Practically nothing can be done at the close of the season but keep some disinfectant in the hive and medicate all food that is given. The vapouriser advertised by Mr. R. Lee will be found useful for the winter, as it can be re-charged without disturbing the bees.—EDS.]

I have found a new dealer in bees lately. On the path near the hives at sunset I met the customer, daddy-long-legs, coming to meet me with a whole bee in its mouth. He being so tall, and the legs so long, lifting his prey so high was coming in style. I suppose he picked up a dead one, but I was surprised seeing a creature so fragile and ethereal walking away with a bee as a prize.

Honey is still maintaining its own with the children. Bread and honey is a delicacy, and suppose will ever be. A young boy having tea with his aunt, and a jar of honey on the table, said to his auntie with a pleasing smile: "I wonder will Mr. —— have some again by the time we finish this." Well, prospects for abundance are not very rosy this year. "EPYNT."

Changes of Colour in Italian Bees.

We can hardly accept the contention of Dr. Bonney ("B. B. J.," November 16, p. 554) that the excess of ultra-violet rays in the air of the north is responsible for the change of colour of Italian bees from yellow to brown. The primary use of the dark brown pigment is no doubt to absorb the ultra-violet rays, but these are much more intense and powerful in the tropics than farther north.

Every animal, man included, is born with a certain amount of a colourless pigment, chromogen. To produce colour this "mother pigment" has to be acted on by an oxidising ferment. Every flapper knows that hydrogen peroxide changes dark hair into any shade of brown, red or yellow desired, but no other tints are produced.

The white races stay white, though they sunburn under a tropical sun, because they have chromogen in their skin and hair, but only the latter contains the ferment which induces the colouring. The black, red and yellow races have both chromogen and ferment in their skins and hair. Sunburn is produced in response to a natural defensive action of the skin against the rays, so as to protect from injury the underlying internal organs.

The change from yellow to brown in the descendants of Italian bees transplanted to a different environment comes about, most probably, from a loss of vigour. This brings about the oxidation otherwise inhibited in the native home of the yellow bees.

Dr. Bonney makes another rather unconsidered statement when he says: "As everyone knows, animals living in the frigid region are white the most of the year, etc." What about the musk ox, the reindeer, the lemmings, the mouse hares, the ravens, penguins, etc.? And if anyone shuts up a domestic cat in an ice-box to see it turn white, he or she will surely be disappointed.

Z.

Keeping Foundation.

[10726] Our friend "Novice" needn't worry about his comb foundation if he keeps spiders away; even if they do spin a few webs he can brush them off before hiving his bees.

I gave up bee-keeping about 30 years ago, and restarted year before last.

I had a lot of foundation stored away in an open box all those intervening years, and no moth or mould has touched it. Since restarting bee-keeping I have used that old foundation for shallows with perfect success. I have not tried it with full-depth frames, as I buy them already fitted. I can't say exactly what year I bought that foundation, or from whom, but I think it was from Mr. Raitt, somewhere in Scotland.

What a season! Exactly like my first season with bar-frame hives, 1867. Hot May. Thunderstorm on the 25th, after that frost and snow. May 29, snow 4 in. deep. Cold and wet all summer. No honey. 1868, hottest year on record; honey everywhere. 1869, no honey. 1870, best year I have ever known. So cheer up, boys! Next year will square off all arrears.

I think, Mr. Editor, we are apt to credit our bees with what perhaps they don't earn. We lay the "flattering unction to our soul" that *our* bees are giving such bumper crops

of fruit to our neighbours; but do they? "I hae ma doots." How was it—if fruit depends on bees for fertilisation—a few years ago, when there were no bees, we had such heavy crops of all kinds of fruit?—

WALTER HEWSON.

Wickhambreaux, Canterbury.

[It was reported in a number of the daily and other papers at the time of the shortage of bees that fruit growers in Kent had to distribute the pollen of their fruit trees by means of a soft brush, generally a rabbit's tail tied to a long bamboo cane, as we have seen used on grape vine flowers in a greenhouse.—EDS.]

NOTICE.

Owing to the Christmas Holidays THE BRITISH BEE JOURNAL for December 28th will have to go to press earlier than usual. Advertisements, etc., for that issue must therefore reach this office not later than first post on Friday, December 22nd.

FOR SALE, 2-year-old Terriers, Dog and Bitch; Sealyham strain; splendid ratters and house dogs; owner giving up out-apiary; 3 guineas each —SECRETARY, Fem. Bee Association, Fishguard. 1.7

FIVE HIVES BEES (two skep, three wooden), Italian and Dutch, £5, or offer.—EXECUTOR, 18, Chatsworth Avenue, Wembley, Middlesex. 1.3

"B.B.J.'S," home-bound, 1902-05, 10s. 6d.; assorted package, 2s. 6d.; half-year "Gleanings," 1911, 2s. 6d.; Roots' "A B C," 1881, 2s.; "Bees," Rev. Wood, 1s.; carriage forward.—BOWEN, Coronation Road, Cheltenham. 1.6

COMPLETE OUTFIT for Sale, four Hives and Stocks, Extractor, etc.; never diseased; owner removing.—40, Blackheath Park, S.E.3. 1.8

WANTED, Light Car, Singer, Swift, or similar make, about 7 to 8 H.P.—W. HERROD-HEMPSALL, Old Bedford Road, Luton. k.42

WANTED for the Continent, a Queen Breeder, methodical and capable of working to schedule time in producing queens in quantity; single person of either sex.—Apply, giving references, to Box 93, BRITISH BEE JOURNAL, 23, Bedford Street, Strand, W.C.2. k.2

THE World's Famous Raspberry, Lloyd George, perpetual fruiting, 10s. dozen, 60s. and 70s. per 100.—J. J. KETTLE, The Violet Farm, Corfe Mullen, Wimborne, Dorset. h.78

TAYLOR'S SOFT WHITE CANDY.

Manufactured from guaranteed pure White Cane Sugar.

1/- per lb., post extra,
or 4lb. parcel, **5/-** post free; 7lb., **8/-** post free; 10lb., **11/-** post free.

Special quotations for large quantities.

Feeders, Quilts and Winter Appliances of every description. Illustrated Catalogue post free on application.

E. H. TAYLOR, Ltd., Behive Works, WELWYN, HERTS.

Special Prepaid Advertisements.
One Penny per Word

Trade *advertisements of Bees, Honey, Queens, and Bee goods are not permissible at above rate, but will be inserted at* **1½d.** *per word as* **ness"** *Announcements,* immediately under the *Private Advertisements. Advertisements of Hive-manufacturers can only be inserted at a minimum charge of 6s. per ½in., or 12s. per inch.*

PRIVATE ADVERTISEMENTS are only intended for readers having **Surplus Stock** *to dispose of.* **Driven Bees, Nuclei,** *and* **Queens that are reared or imported for sale,** *are Trade Advertisements, and can only be accepted under trade terms. A charge of 6d. extra per insertion will be made if a box number is used.*

Orders for three or more consecutive insertions in "The Bee Journal" entitle advertisers to one insertion in "The Bee-Keepers' Record" free of charge.

PRIVATE ADVERTISEMENTS.

DOZEN excellent six standard-frame W.B.C. Hives, four unused, outer cases 14 in. x 20½ in., two lifts, slanting roofs, detachable porches; suit commercial bee-keeper; best offer secures; owner adopting larger hives.—APIARIST, 34, Park Street, Tunbridge Wells. 1.4

BUSINESS ADVERTISEMENTS.
1½d. per word.

THE SOUTH HAMPSHIRE APIARIES beg to announce they are now booking orders for next season, and would advise their customers to book early to ensure first delivery.—Catalogue on application to H. E. NEWTON, New Milton, Hants.

CONQUEROR HIVES.—S. Simmins has decided to offer these Hives again in response to many urgent inquiries (on early orders only). Particulars free.—Queenland, Heathfield, Sussex. r.l.5

HONEY FOR BEE FEEDING.—West Indian, new, 56 lbs., 40s. 6d.; carriage paid; reduction quantities; samples on application.—LONDON TRADING AGENCY, 32, St. Mary Axe, London, E.C.3. 1.9

STRICTLY BUSINESS.—Flavine—S. Bee Candy, 4 lbs., 5s.; 6 lbs., 7s.; 10 lbs., 11s.; 20 lbs., 21s. Larger quantities by passenger or goods train at a reduction in price.—S. H. SMITH, 30, Maid's Causeway, Cambridge. r.k.63

RYALL'S ADVICE ON WIGHT-ACARINE TROUBLES, 5s. 6d.—8, Ospringe Road, N.W.5. r.k.67

PURE CLOVER HONEY in 7-lb. tins, an Ideal Xmas Gift.—PEARSON & GALE, Marlborough.

The Candy that is eaten to the last grain.

BEE CANDY.

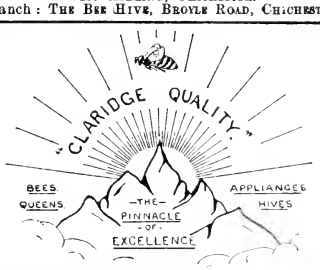
Finest quality of guaranteed pure cane sugar, made by James Pascall Limited, is now reduced in price to—

7 lb. parcels *packed in* **7/-** *Postage 1/3*

(with reductions on 1 cwt. and over).

JAMES PASCALL LIMITED, 100, Blackfriars Road, London S.E.1.

STEEL'S SUPER CANDY.
4 lbs. **4/8**; 10 lbs., **10/-**; carriage paid.
Special quotations for quantities.
STEEL'S BEE HIVE WORKS,
WEST ASHLING, CHICHESTER.
Branch: THE BEE HIVE, BOYLE ROAD, CHICHESTER.



F. M. CLARIDGE, Copford Apiary, Colchester.

HAVE YOU READ "THE BEE WORLD"? If not, why not? Every number in itself is a useful literary work for practice and reference. Specimen copy free.—Offices: THE APIS CLUB, Port Hill House, Benson, Oxon.

The products of the Apiary, of Poultry and Farm Stock, of the Fruit and Vegetable Garden can be advertised and Sold through

THE
Bazaar, Exchange & Mart
Newspaper,

Get a copy—Thursday and Saturday, 3d. The "Bazaar" publishes also practical hand books by experts. Send for full catalogue, post free from WINDSOR HOUSE, Breams Buildings, LONDON, E.C.2.

OVERTON'S MEDICATED CANDY.
MADE FROM WHITE PURE CANE SUGAR.

GLASS TOP BOXES (1 or 2 lb.) ... ... 4 lb., 5/-; 7 lb., 8/3; 10 lb., 11/6; Post Free.
PLAIN TOP BOXES do. ... ... 4 lb., 4/9; 7 lb., 7/6; 10 lb., 10/-; do. do.

C. T. OVERTON & SONS — CRAWLEY, SUSSEX.

FAMOUS COTSWOLD CANDY

4 lbs. 5/-; 10 lbs. 10/-;
20 lbs. 20/-; 28 lbs. 27/-.
Carriage Paid to Nearest Station.
Lt. A. H BOWEN, Coronation Rd., Cheltenham.

IDEAL XMAS FEED

For best bees, queens and appliances come to PEARSON & GALE, Marlborough.

ESTABLISHED 1870.

Premier Quality—Got rid of all others.

"In the year 1920 I purchased one of your 'White Star' Nuclei, and although, as you know, the season was very bad, I did exceedingly well with your bees, and I am ordering a further supply, *having got rid of all others.*"—C. W.
[Later] "I received the bees well packed and in good condition, only five dead bees in the lot. I can assure you I am well satisfied." Stairfoot, Barnsley, 1922.—C. W.

The only Pedigree strain bred by intense selection of both queen and drone breeding mothers for more than 30 years. 20-page Annual and Reduced Price List for 1923, free.

S. Simmins, Queenland, Heathfield, Sussex.

ENGLISH HONEY

Guaranteed Pure.

1/3 per lb.

Free tins and crates, sample 3d.

FRENCH HONEY

Guaranteed Pure.

1/- per lb.

Free tins and crates, sample 3d.

RONALD HARVEY, The Apiarist, ANDOVER.

BEE CANDY.

Made from Pure Cane Sugar, and guaranteed free from Glucose. Prices:—

1 lb. at 1/-, post 2d. 4 lbs. 5/-, post free.
7 lbs. 8/- post free. 10 lbs. 11/- post free.

Special prices for large quantities on application. SYRUP in 7 lb., 14 lb. and 28 lb. tins.
Use the WORMIT Combined Feeding Board and Winter Cover, as advertised in issue of 24th August.
FEEDERS of every description. Full particulars in Illustrated Catalogue sent post free on application.

Dadant's New Patent Wired Foundation.

Supplied in the sheet, with wires embedded all ready for use.

SAVES TIME. SAVES LABOUR. SAVES MONEY.

Price only a little more than that of ordinary foundation.

Prevents sagging and gives a perfect comb.

Has been tested and proved for several years in hundreds of colonies.

Send for a sample pound and judge for yourself.

We are also making special frames to suit this foundation, but old frames, if in stock, can be adapted by the use of a special bottom bar.

R. STEELE & BRODIE,
Bee Appliance Works, WORMIT, SCOTLAND.

The Bee-Keepers' Calendar.

DECEMBER, 1922.

21 Thursday. "Amang the trees where humming bees
At buds and flowers were hinging, O,
Auld Cabdon drew out her drone
And to her pipes were singing, O."
Burns, "Amang the Trees, Where Humming Bees."

22 Friday. "Bite, frost, bite!
You roll up away from the light
The blue wood-louse, and the plump doormouse,
And the bees are still'd."—*Tennyson, "The Window."*

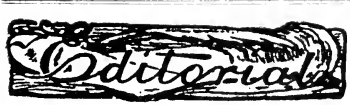
23 Saturday. "He is not worthy of the honeycomb
That shuns the hive because the bees have stings."
Shakespeare.

24 Sunday. "As a horse when he has run, . . . a bee when it has made the honey, so a man when he has done a good act, does not call out for others to come and see, but goes on to another act, as a vine goes on to produce again the grapes in season."—*Marcus Aurelius.*

25 Monday. "A honeyed heart for the honeycomb,
And the humming bee flies home.
A heavy heart in the honey-flower
And the bee has had his hour."—*Rossetti, "Chimes."*

26 Tuesday. "Blithe as the wind in the trees,
Blithe as the bird on the bough,
Blithe as the bees in the sweet Heart's-ease
Where love lies bleeding now."
Noyes, "The Progress of Lore."

27 Wednesday. "In every plant the liquid nectar flowed,
In every bud and every flower that blowed;
Here roved the busy bee without control,
Robbed the sweet bloom and sucked its balmy soul."
Keats.



Bees and Nature.

On another page we publish a valuable contribution under the above heading from Mr. Hugh Houston. We intended making a few comments at the foot thereof, but find we cannot condense our remarks sufficiently to deal with it in that manner. We are greatly obliged to Mr. Houston for his article, though he has not interpreted what we said quite as we intended it should be interpreted.

We are, however, pleased it has evoked such a well-reasoned article from his pen. We do not think he is likely to met us near Bedford Street "bearing a paleolithic instrument" or even a boomerang, but when out in the cold, piercing winds we get at times during the winter months we would not object to being "attired in skins"—we presume he means with the fur on. Unfortunately our finances will not run to it. A fifty-guinea fur coat would contribute to *our* joy, and possibly dignity as well, and the rest of London be lost in envy.

We are in accord with Mr. Houston that in many ways man *has* "improved on nature" in so far as getting some result he has worked for, perhaps it

would be more correct to say he has "assisted" nature, generally by a process of selection, but often what is gained on one hand is lost on the other. We have not space to give instances, but any one may find them with a little thought. Our point was that we do not agree with those who say that our native bee had degenerated by "inbreeding." There appear to be several explanations of that word. That given by the Rev. E. F. Hemming last week is one, but we do not think it covers all the word means. Our own idea, and we believe the general acceptance of the term, at any rate so far as bee-keepers are concerned, is that it means the mating of and breeding from blood relations

Breeding in any peculiar characteristic found in some particular animal, bird, fish, or plant can only be done by "inbreeding," and as that word is not in altogether good odour the process is euphemistically termed "line breeding." Mr. Houston's example of the horse, cow, poultry and fruit given in his third paragraph goes to show that "inbreeding" (or shall we say "line breeding?") does not cause degeneration, if accompanied by the selection for parents of those individuals showing the desired characteristics. True, cross breeding may be necessary in the first instance in order to secure what is wanted, but once this is attained inbreeding is necessary in order to "fix" the particular trait it is desired to perpetuate.

Even if inbreeding is the bogey it is represented to be, we fail to see that it took place, or can take place to any great extent, in the case of the hive bee, if left to its own devices, or in other words to "Nature." Up to the present the mating of the queen is practically beyond the control of man. He can choose the mother of his stock, but, with a few exceptions that prove the rule, he cannot choose the father. We have still the impression that, as we said on page 590, it would have been more useful if our bee-keepers of years ago had by selective breeding (assisting, or "improving on" nature if either of those terms are better liked), tried to improve as much as they could the bee that had become thoroughly acclimatised. Working on those lines they would probably have done more good than they did by importing queens of foreign races which resulted in, if we may put it in that way, promiscuous interbreeding between the native bees, Italians, Cyprians, Carniolans, Syrians, Algerians, etc., for no one had, or has any, control over the drones.

It is quite possible that this mixture of foreign blood which found its way into all but a few of the most remote and conservative apiaries is more likely to have been the cause of the "native" bee falling such an easy prey to Acarine disease than degeneration through "inbreeding." We feel certain much may be done with the bees we have now by careful selective breeding without any further "improving on Nature" by the importation of foreign blood. Mr. Houston's idea of a kind of bee stud book is admirable if it could be carried out.

A Dorset Yarn.

"The birds rejoice in leafy bowers.
The bees hum round the breathing flowers."

Three days this last week our bees were out on the daisies; the sun had made quite a lot of them open. Burns has written much of bees in his delightful poems, but his expression of "breathing flowers" shows that he was a great observer of Nature's secrets. The mild weather has made even birds to think that winter has finished. To see bees on daisies in December one would think that the queen was laying, when the workers are eager to gather pollen. We have always the yellow gorse at one side of the farm, but bees were not on this. They are very fond of the shrubby veronicas that bloom in winter; they are quite hardy down here. There are many beautiful varieties of them. We have had them in the motor-lorry, and bees have come to them when calling at another bee-keeper's home. When he saw the bees on them he could not help but buy some of them. This gentleman had been a resident in India for twenty-five years. His yarns on bees in the Indian Empire were very entertaining; the small ones that hang their combs in the trees, and the very large ones that build their combs by the sides of rocks, and when food gets scarce in one area all move off to another place where flowers are plentiful. This would not be of much use to us if they cleared off when the flowers were over. Our bees are more conservative; they are not in a hurry to leave the hive. During all my long life I have only had one hunger swarm. Our bees, when food is scarce in summer, begin to clear out the larvæ of the male. They never think of leaving their stores of food unless it is when swarming. They are not even eager to swarm if there are not plenty of flowers and the weather is fair, but in that great Empire there are many large flowering trees that bloom in some of the provinces the whole year round.

In this area, close to the sea, there are many plants that thrive and throw out flowers in winter. The escallonias make huge bushes 8 and 10 feet high. At one of our farmhouses there are some nice plants which seem to be always in flower. It is a favourite seaside plant, but it does well many miles inland in some counties, but the shrubby veronicas are visited much more by bees than are these escallonias.

I saw some paintings of bee plants at the

Horticultural Hall at the last meeting, and the artist had painted the bees on them; one lady had the flowers of Vancouver (Western Canada). Here again were many flowers from which bees get abundance of stores. So clever was this lady artist that they looked to be real honey flowers. A visitor from the North was surprised to see the bees flying in December; any fine day in winter they are to be seen on the Laurustinus. Though this will bloom over a long season, bees are most on it in the last months of the year; they leave it entirely alone when other flowers open.

The lady artist from Vancouver showed the Canadian thistle, said to be a prolific honey plant in Canada, but should not advise any British bee-keeper to plant it for bees, as it would be a nuisance, so difficult is it to get rid of. Some knotweeds, or Polygonum, are very much visited by bees, but they should be planted in waste parts of holdings, for some are most difficult to clear out of the soil, as the smallest piece of root will form a new plant. Have had them get under the foundations of glasshouses and come up inside. I had seen bees working the flowers when at flower shows, and had purchased some. There must be a lot of food in them, or bees could not find it under the canvas tents in summer, but they will do it. They are sure to be on the honey flowers when set up for exhibition. They must smell the nectar through the canvas, then they have to find a way in to get it. "The breathing flowers" written of by Burns, when all is favourable the nectar is forced up or drawn up by the atmosphere, making a strong scent, so that bees can trace it. Burns is quite true *re* bees in leafy bowers. There is a big tree of elm covered with ivy close to our house, and the liquid note of the blackbird is very sweet; the thrush sits up very high in the branches, carolling out its "love song in the morn." It is now 7.30 on a Sunday morning, December 17. One could, as a boy with plenty of imagery, hear this bird overflowing with exuberance, showing off to other thrushes his wonderful power of song; but I must not digress from bees, or shall be called to account.

I have asked Mr. Ellis, of Gretna, to give us in detail in THE BEE JOURNAL how he works the large brood chamber with two queens, as with me, even though both queens are from the same hive with an excluder zinc between the two, they stay separate for a time and each will lay eggs, but it is not long before one "goes west," and the combs get filled entirely with honey. The fault is mine in some detail. Please leave out my yarn and give him space to show me where I am at fault.

There are others who, like me, find section honey sells most readily, and we want to be able to get the best method of producing it. We do not want so many stocks, but good, strong producing ones. We have had one queen in bottom box with an excluder over, another queen in box above. Have placed a hanging queen excluder on the centre of the bottom box, and another in the top box, but so far have not been successful; yet where we have not had an excluder to work the two queens we have found two working, but it is too late to know if they are still in each brood box, the lower and upper. We have left each as we found them when taking off supers for extraction.

J. J. KETTLE.

Week-End Bee-Keeping.

BY S. H. SMITH, CAMBRIDGE.

(*Continued from page* 557.)

"One part of sodium cyanide dissolves readily in two parts of cold water, but one part to twenty will be plenty strong enough for our purpose. We pour a pint of water into this quart bottle, pound up the cyanide lumps, drop in the whole ounce, cork the bottle and shake it vigorously. We label the bottle with a poison label and keep it locked up in the cupboard with the cyanide when not in use."

"It is hardly dusk yet, but we may as well make a start, D. B. We will destroy the wasp nests furthest away and work back to the nearest one, which is only 100 yards from here. No veils are needed, only the poison bottle and the hive tool. The wasps won't attack us unless we stir up their nests. In looking at mid-day for their entrance holes I've sometimes stood directly over one, and wasps have given me warning stings—light touches that left small, bloody spots—but no swellings resulted. However, the wasp poison affects different constitutions differently, and I've known seasoned old bee-keepers, who held bee stings in utter contempt, to run like rabbits when confronted by an angry wasp. And I have nursed some exceedingly painful punctures inflicted by these wonderfully adroit insects. But I have never cherished any malice, as every time they landed on me it was my own fault."

"Here we are. That branch stuck in the ground close to the entrance hole with the piece of newspaper inserted in a cleft is to guide one to this spot. The *modus operandi* is very simple. With the hive tool you cut a piece of sod and place it handy. Then you pour into the hole a few ounces of the cyanide solution, cover the hole with the sod, press this down with the toe of your boot, and all adult wasp life in that nest will be extinct very shortly. To-morrow we could come and dig out the nest. Sometimes you will find such a large and perfect specimen that it is well worth while preserving it."

"Not many of the wasp larvæ will be killed outright by the comparatively weak fumes of a one to twenty cyanide solution. To-morrow, and for some days, they will be opening their mouths and asking for food. If you know what to look for, and know how to provoke the manifestation, you will also see a queer characteristic trait common to all the social wasp larvæ, viz., the offering of a secretion to the forms that feed them. The queen wasp and the males, as well as the workers, all eagerly seek this liquid from the

mouths of the larvæ, just like ants seek the secretions from plant lice and other insects."

"I want to see all this, Week-End. I don't find these doings in the books."

"All right, old chap, we will come here to-morrow and dig up a nest. It is a pleasure to work with one who displays an intelligent interest. We shall also find that many wasps, just ready to emerge, have survived the fumes and have bitten their way out through the cell cappings. At this season there will be in the nest hundreds of virgin and fertile queens, all potential 1923 nest builders, also many male wasps. You can recognise a male wasp by its long antennæ."

"Besides the endowment of the fertile females of wasps, bumble bees, ants and termites with the power to establish nests by their own efforts, there is yet another difference which distinguishes the queens of the wasps and bumble bees from those of the honey bee. When a queen of the latter tribe receives the spermatazoa in her spermatheca at any time during the season, she commences to lay fertile eggs within a few days. The queens of wasps and bumble bees couple only in the autumn. They, too, store the spermatazoa in their seminal receptables, but ovulation and fertilisation are delayed until the following spring."

"One may not compare insects with mammals, D. B., but it is curious to note that bats couple in the autumn, and though they own no seminal receptacles, with them, too, ovulation and fertilisation do not occur until the following spring."

"Here's the next scene of slaughter. You've seen the moves, D. B. Now go ahead and practise them. Yes, a few wasps are still returning from the fields, but they won't bother you. You should have seen this hole on the hot day in August when I discovered it. Thousands of wasps were then pouring in and out like a stream of living smoke."

"Neatly done." Cyanide is cheap, so you do not have to be too careful of the dose. No, you may do in all the other nests if you like. It is not a wasp-complex, dear boy, but I really like wasps, not only the *Vespidæ*, but all kinds. My first excursions into entomology were via the wasp route. Fabre's wonderful revelations concerning the *Pompilidæ*, particularly the activities of *callicurgus annulatus*, as revealed in Vol. II. of his "Souvenirs Entomologiques," set me going. There were no English translations in those days, and I had to puzzle out the idiomatic French in the original. I had no liking for French as a boy, but Fabre changed all that. I'd eagerly watch out for each new volume as they appeared. There was plenty of time to thoroughly digest their contents as the books came out at intervals of four years."

"No need to dig a sod for this nest. The soil is so loose you can kick in the entrance. Finis to that. We could easily knock out a couple of dozen nests per evening if we had them marked down."

"You will laugh, D. B., but that board, painted white, that runs across the workshop over the door, was done on purpose to have a little fun with wasps. You can just make out some little black spots painted on it at six-inch regular intervals. Well, every summer wasps come around and try and seize those spots, mistaking them, no doubt, for earwigs or flys. They go from one to the other in regular order; sometimes one wasp will follow another for minutes at a time. You would have to be up early to see this performance at its best—about 5 to 6 a.m. Why didn't I tell you about this before? How long would my connection with the D. B. apiary have lasted if I had induced you to make such early visits to this apiary? Your better half would have had something to say."

(*To be continued.*)

Bees and Nature.

Your editorial in the JOURNAL of December 7 gave me a bad attack of the hump. One gets accustomed in time to the ditherings and maunderings of the "Back to Nature" people, because such folk do not in general amount to very much. Besides we are enjoined in the Scripture to suffer them gladly. But it is different when sensible people, and especially men of light and leading, show a tendency to join forces with them. Knowing you to be a conscientious man, and a consistent, I implore you to consider your ways and where they will land you, for if you pursue your course to its logical conclusion we shall certainly see you one day striding up the Strand to Covent Garden attired in skins and bearing a paleolithic implement of the Mousetier type instead of the inevitable fountain pen. What London would gain in joy that day, the Bee-keepers' Association would lose in dignity.

Is not the whole of our civilisation the outcome of "interference with Nature"? Would mankind ever have produced a Shakespeare, a Michelangelo, or an Edison if Nature had never been interfered with? Granted that the Nyam-Nyam cannibal of Central Africa or the black fellow of the Australian bush may possess a better physique, who will give such unassisted products of Nature the precedence over men like those I have named?

Man has become what he is simply through interference with Nature. And what he has accomplished for himself in this way he has also largely secured for many of the lower animals. Where in Nature will you find a horse like the Shire, the Blood, or the Percheron; where a cow like the Shorthorn or the Friesian; where fowls like the Wyandotte, the Orpington, or the Leghorn? It is the same in the vegetable kingdom. The originals of the apple, pear, plum, potato, even the corn that forms our bread, are poor insignificant things compared with what has been evolved from them by man's "interference with Nature." Man took up all these things where Nature left off, and has carried them to heights that Nature unassisted would probably never have accomplished. It seems that it is only in relation to bees that this

beneficent work will produce adverse results, if we are to listen to what the pundits say.

And yet even among bee keepers a certain microscopical advance is sometimes to be observed. For instance, I see fairly frequently in your columns references to the crossing of various strains of bees, what strains give the best results when crossed, and how to effect such crosses. Now this is an advance, for only two short years ago all the "experts" were unanimous in declaring that anything like scientific crossing of bees was utterly impossible, owing to the impossibility of controlling the drone stock. *Nos mutamur.*

So far as I can see, it is not so much our bees as our bee-keepers that want improving. Every bee-keeper gets the kind of bees that he or she deserves; and so long as it pays better to sell "any old kind of bees" rather than high-class stock, so long will there be complaints about unsatisfactory bees.

I will cite my own experience. When I started breeding bees I proceeded on the lines that I had found satisfactory in breeding other kinds of live stock. To begin with, one must get the very best that is to be got anywhere, and then proceed to improve upon that if he can.

I therefore sent to most of the big breeders in Europe and America, ordering selections of their stock, and stipulating for the best that they could send me. Out of all these I picked two or three of the very highest quality, and proceeded to breed from them in the most approved way. I got good bees. They gave a big return of honey, swarmed scarcely at all, and never showed the least tendency to disease. Close around me were empty hives, the bees in which died out, their owners said, from Isle of Wight disease. Mine never contracted it. I even bought other people's bees, and watched them gradually melting away, like snow in the sun, beside my own, and mine remained immune. (No, this is not an attempt to get a cheap advertisement, as you will see if you read a little further.)

"Why," you will say, "that is the very kind of bee that bee-keepers want." No, that is just the trouble. That was the very kind of bee that bee-keepers did not want. I fixed the price at first at five shillings for a fertile queen, and sold hundreds at this price—chiefly, I am convinced now, because they were cheaper even than duds. Finding it a ruinous business, I tried raising the price to six shillings, and found it began to blow very cold in many quarters. When I asked seven shillings, the trade nearly stopped.

Can a first grade queen be produced for seven shillings? I do not think so. I am convinced that it pays much better to produce honey than queens at that figure, and as I am not a millionaire philanthropist, that is what I am chiefly doing now.

Let us go into figures a little. From a good strong stock in early spring any fool can produce eighty pounds of extracted honey in an average season, which at the giving-away price of a shilling a pound returns something like £4. If sold in bulk there is practically no expense. The same stock turned to queen-rearing has to be broken up into nuclei, three at the most, and each nucleus will rear three fertile queens, on an average, before going to pieces in our short mating season. From your good stock you will therefore get nine fertile queens, which at the extreme price of seven shillings shows a return of three guineas. From this falls to be deducted the cost of sugar for feeding the nuclei, for travelling cages, postages, and advertising. There is besides the expense and loss of keeping at least two other strong stocks going, a queen and a drone stock, from which no return can be expected, and one of which has to be bountifully fed for part of the season. And you have lost your stock which you broke up for nuclei.

Now look at the pro and the contra. Your stock, if kept for honey, gives £4 profit, and is as good at the end of the season as it was at the beginning. When broken up for queen-rearing it returns about thirty shillings, and disappears. It is not difficult to see what a ruinous business the breeding of bees on scientific lines is for the private bee-keeper under present conditions. I say nothing about the emoluments from "any old kind of bees," the selection and breeding of which is carried on without any "interference with Nature."

It all boils down to this: If bee-keepers are convinced that one bee is as good as another, and refuse to pay more for a thoroughbred queen than for a dud, there is little hope for progress in the development of the honey bee so far as private enterprise is concerned. Something may be done by associations of rich individuals, and more by experiments conducted in laboratories and experimental stations with the encouragement and support of a Government Department. But no private bee-keeper can be expected to furnish the public with high-grade stock at a ruinous loss to himself.

Well, is there anything to be done, short of Government interference? Yes, a good deal. Some kind of official guarantee would go a long way. There is a stud-book for thoroughbred horses and cattle, there are milk-recording tests for cows, and egg-production tests for fowls. A man will give £10,000 for a yearling foal from a stud-book champion, when he would not give the tenth part of that for it minus the guarantee. A Friesian with a high official record will easily fetch a thousand pounds when it would be reckoned dear at a hundred among a bunch of common beasts. Many people will pay £5 for a sitting of eggs from a well-known strain when "any old kind of eggs" are selling at six for a shilling.

I am convinced that if the same kind of thing could be done with bees there are plenty of bee-keepers who would pay a fair price for properly bred stock, but without some kind of official guarantee they will not pay. And I do not altogether blame them.

What is wanted is for someone to do for bees what has been done for horses, cattle, and poultry. We go the wrong way to work in our competitions when we judge the honey; it is the bee we should judge. There should be some kind of official test, with carefully kept records, and certificates issued

to the stocks gaining the highest number of points. There would be no difficulty in getting competitors. I personally know a good many bee-keepers who would enter the best among their stocks, and be prepared to stand or fall by the result.

I personally do not see that there is anything insuperable in the establishing of such a test or competition. I am convinced that more than one expert would undertake the supervision of the competing stocks with perfect fairness, in return for, say, part of the harvest gathered. I had hopes that the late Lord Northcliffe, had he lived, might have seen his way to do for the bees in this direction what he did for other departments of rural life, but with the passing of that great and able man that hope also died. Perhaps in the near future we may find some public-spirited man able and willing to step into his shoes.

In the meantime I do not see why a beginning at least should not be made in the direction which I have indicated.—HUGH HOUSTON, Sidcup, Kent.

Degeneration of Bees.

You ask for other readers' opinions of Mr. Flashman's and the Rev. E. F. Hemming's letters. Taking the former first, his opening sentence in which he refers to "blood relations in the true sense," seems to me to show such confusion of thought that I rather doubt if he has any knowledge of what he is writing about.

As to relationship between drone and mother, "how often does it take place?" is simply a matter of speculation, but I think we may assume that the queen, just as much as the drone, may have a choice in the selection of her mate, and that where she has freedom of choice some matings may be repellent to her.

Now to turn to Rev. E. F. Hemming. I do not see how I can do other than ask him questions to get at what he is driving at, and at the same time to give him pointers to clear up in his reply.

Do you really imagine these "truly wild bees" that "have degenerated as honey gatherers" are the same bee as the British brown? Personally, I don't think so for one minute. I do not think they are the survival of the fittest, because if one procures some of them, they, those I have tried, readily become infested with *Acari* and succumb. They have the bad traits of Dutch hybrids of being great swarmers. They are, as you say, poor honey gatherers (they would ruin me if I kept them), and I think they are the offspring of imported Dutch. Imported Dutch must, from the reports one reads about them, vary considerably in their honey gathering qualities. Personally, I should require to be heavily subsidised to cover any losses were I to keep them or their crosses if they gave the same results as those I had previously, and which I found it cheapest to destroy. I think this should make it clear, that it is not a degenerate bee, but the importation of an unsuitable bee which is at the root of some bee-keepers' trouble. Other points I will deal with further on.

In another of your articles you consider that the old English bee is a pitch-black bee, and there I am totally opposed to you, and from the inquiries I have made so are others. I believe your "Holmewood" bee, sprung from imported bees, have become acclimatised. I want some day to follow them up, and if they are the type I think them to be I can tell you where similar ones can be found in other parts of the country. The first lot I ever got into touch with I found out were brought over by a clergyman in the late 'seventies.

Page 223.—You state "a princess born of a first cross will often mate with a drone of its grandmother's breed if we see that such are about." What grounds have you for that statement? Queen matings on those lines should therefore be easy if your statement is correct, and assuming you mean all that, why write so much about drone traps?

Pages 590, 591.—"Those drones which never seem to fly more than a few yards from their home should be trapped and destroyed," is your statement. How are you going to identify them? Why trap and destroy them? On what grounds do you assume that your interference with their natural inclinations would benefit you? Do you mean that you would like your virgins to mate with drones which came from A's apiary miles away? "And drones which have no sense of location" should be trapped "if you are wanting virgin swarms," and then you go on about "rudders." I must confess you have got me beat. What are you driving at? Now, really some time ago you told us to rear drones above an excluder, and then withdraw it, and we should have a swarm. Please, please——.

Page 302.—You state: Drone trap a hive and you need not fear the presence of queen cells if you are not wanting swarms. Then all I have to do is to make a drone trap for each hive and put it on in the spring, is that it?

I wouldn't mind your making these statements were it not for the amount of resultant questions I have to answer by post, or I regret to say pass over sometimes for lack of time to answer them.

Page 579.—So that's how you would set about producing golden bees, is it? Now, I will put you a question—yes, another one. Supposing you hadn't the golden bee to start with, how would you set about to produce one? Just imagine us all in a class sitting round thirsting for information. Here's yet another question I have been wanting to ask you for a long time—page 507. Referring to that adulterated honey you mention. What steps did you take to stop the sale of it? Did you report it to the B.B.K. Association?

Before answering the Editor's suggestions I give the following notes I have made. Some matings take place within the apiary, and if you, Mr. Editor, can face the expense of having view shown in the JOURNAL I will send you one and indicate the exact spots

of matings all in one day. [Such an illustration would be very interesting and useful, and we should be pleased to have the block made.—EDS.] We ran 850 stocks this year, so that we now have little time for taking an "easy" to enjoy bee-keeping. Yes, same old game, each apiary started with bees suffering from *Acari*.

Readers will be interested to hear that the manner by means of which the spermatozoa in a fertile queen are possibly prevented from reaching the egg has been the subject of research by one investigator for some time, and I hope he will soon give us of his painstaking work, knowledge and observation.

I know of a swarm travelling from five to six miles. Experience rather points to the fact that large apiaries attract other bees from outside apiaries whilst a flow is on, also other swarms.

To what extent it attracts outside drones I don't know.

A swarm in the air will attract virgins out on mating flight, and again when they are clustered I have seen a virgin attach herself to them.

All these are factors which one has to get over in producing a special strain.

Apart from bees, various types are produced by in-breeding. Is in-breeding, with brains, so very harmful?

I agree with those bee-keepers who "maintain that the only way to get an immune bee is by selective mating." I agree because I consider we have done it. This article is, I fear, long enough, so experience must be left to another time. What we really are elated about is that we have produced a bee that really does get honey, and can get so many repeat orders for them on this latter account, as there are still a few bee-keepers left who keep to honey production.

There is always a fly in the ointment, and our difficulty is to get the matings we require, but we manage it.

To anyone who knows a little of the laws of heredity the difficulties of cross matings in animals, etc., are bad enough, but in bees it is even worse still. I would, however, draw your attention to Mr. Gilbert Barrat's work, which does not seem to have received the attention it merits. Your editorial remarks about foreign races and selective breeding from the native bee may or may not be correct; 'tis useless to discuss it now. What we have to realise is that there is a most horrible mix-up here now, and we have got to put our brains into it. [But won't that make the "mix up" worse? Pardon us, Mr. Thomas, we could not resist the temptation.—EDS.]

"Man is too fond of trying to improve Nature." Exactly; this feed, feed, feed syrup or candy is the curse of bee-keeping in my opinion. My mating difficulties would be over but for that after this last season about here. If the stocks that got nothing this last season had only been allowed to starve, or have been smothered, "Nature would have had her way." Instead of that they have only been fed to be a nuisance again. Our bees are very scattered, yet we have only had to feed under an average of 2 lb. of sugar per stock, and that was a mistake through taking off too much honey and making too much increase at one end. I don't mean we got a decent crop, for we didn't.

The following is only supposition. I don't think we should ever have produced a pure British brown bee that would have withstood the attacks of these *Acari*. I rather think the *Acari* were introduced to these islands by some means or other, that our native bees were susceptible, and it was simply good bye. Although I have had a method of controlling this disease by drugs and otherwise, I most certainly do not believe in their continuous use for either bees or human beings, and that was why I turned my attention to producing, or attempting to produce, an immune bee. Do that, and you have burst all the drug trouble.

G. THOMAS, Exning, Suffolk.

December 9, 1922.

Harrow Bee Keepers' Association.

The general meeting of above Association will be held at 297, Station Road, Harrow, on Tuesday, January 16, 1923. It is hoped members will make a special effort to attend.

J. L. ROGERS, KENDALL YOUNG, Hon. Secs.

Newcastle and District Bee Keepers' Association.

A very instructive lecture was given by Mr. Smith, bee expert, of Benton, on "How to Control Swarming" to the members of above Association, at the Bensham Settlement, Gateshead, on November 23.

Mr. Smith had a good reception, and his lecture was very closely followed. His suggestion of the non-sectional super drawn out in early summer and then put away till heather flow was a "tip" many thought well worth trying. His remarks *re* ventilation and room for queen for egg laying were very good. A hearty vote of thanks was given to him at the conclusion. Bee-keepers were present from South Shields, Wickham, Birtley, etc. The next lecture will be given at the Armstrong College, Newcastle, when one of the professors of the college, Mr. Peacock, will lecture to the members. Date and time will be announced later. A hearty invitation is given to all bee-keepers in the district to come along to the lectures.

J. S. GILES.

Worcestershire Bee Keepers' Association.

The honey show of the Worcestershire B.K.A., held in Worcester on November 15 and 16 in conjunction with the root, fruit, grain and flower show, was in every way satisfactory, and quite justifies the holding of an autumn show of honey. In the gift classes for single bottle (liquid and granulated) no fewer than seventeen entries in each class were staged, including exhibits

from Suffolk, Yorkshire, and other distant counties. Dr. W. E. Moore-Ede officiated as judge, and his awards met with general satisfaction, though his task was by no means a simple one. The following is the prize list :—

OPEN CLASSES.

Display of honey wax, etc.—A. H. Bowen, Cheltenham, 1; A. C. Shinn Guarlford, Malvern, 2.

Six 1 lb. sections.—G. Evans, Newport, Salop, 1; A. H. Bowen, 2; A. C. Shinn, 3.

Six 1 lb. bottles liquid honey.—A. R. Moreton, Hallow, 1; A. C. Shinn 2; Rev. H. J. T. Sanger-Davies, Tewkesbury, 3.

One 1 lb. bottle liquid honey (gift class), prize 20s.—G. Evans, 1.

One 1lb. bottle granulated honey (gift class, prize 20s.).—G. Evans and A. H. Bowen equal.

MEMBERS' CLASSES.

Six 1 lb. sections.—A. C. Shinn, 1; Mrs. T. L. Walker, Broadwas, Worcester, 2.

Six 1 lb. bottles liquid honey.—A. R. Moreton, 1; Mrs. T. L. Walker, 2; Miss Adam, Kidderminster, 3.

Six 1 lb. bottles granulated honey.—S. Leedham, Bromsgrove, 1; A. C. Shinn, 2; A. R. Moreton 3.

Shallow comb for extracting.—S. Leedham, 1; A. C. Shinn, 2.

Beeswax, 1 lb., in any form.—H. W. Taylor, Earl's Croome, 1; O. Taylor, 2.

NOVICES' CLASS.

Four 1 lb. sections and four 1 lb. bottles.—Mrs. W. T. Curtler, 1.

For the highest number of points gained on the whole schedule, 1st, 2nd and 3rd prizes counting 3, 2 and 1 point, respectively :—1st prize, bronze medal given by the Apis Club, A. C. Shinn; 2nd prize, bronze medal of the Worcestershire B.K.A., G. Evans.

GEORGE RICHINGS, Show Sec., W.B.K.A.

Echoes from Cornwall.

In reply to 10718, I admire Mr. Willmore's sportsmanlike and gentlemanly action in admitting that he has "put the hat on," and therefore any further comment thereon is unnecessary, and Mr. Willmore goes up in my estimation of him.

The weather here in the West continues mild; the bees are continually on the move and are still carrying in pollen. I notice they are on the wallflowers, quite a number of which are in bloom in my garden, and the merry hum of the bees is quite pleasant to the ear, reminding one of springtime. There are quite a respectable number of flowers in bloom around here, and in the early part of last month I noticed a yellow laburnam in bloom—unusual is it not? The honey exhibit at the re-formed Camborne show a few days ago were, unfortunately, not very large, as everybody had had so bad a year. The awards were as follows :—

1922 Light Extracted Honey.—1st, A. D. Bennett; 2nd, A. F. Knight; 3rd, A. Sweet.

Dark Extracted Honey (1 entry only).—1st, A. F. Knight.

Granulated Honey.—1st, A. F. Knight; 2nd, A. D. Bennett; 3rd, A. Sweet.

Sections (1 entry only).—1st, A. F. Knight.

Wax (1 lb. cakes).—1st, A. D. Bennett; 2nd, A. Sweet; 3rd, A. F. Knight.

Rev. J. Beecroft was the judge.

A. D. BENNETT,
Local Adviser, Cornwall B.K.A.

English v Foreign Bees.

[10727] Since reading the recent letters on the merits of the former and the question of in-breeding, I feel constrained to say a few words thereon. The qualities of the Old English or brown bee were in many respects excellent, and up to now have not been beaten; but why lament their departure when it is admitted and known to thousands (to their cost) that they fall such an easy prey to Acarine disease? There are several traits in the foreign bee that I do not like, but surely one live stock of foreign bees in spring is worth a many dead English, and I for one do not want the unpleasant duty of clearing up by burning, scraping, melting and burying bees, combs, food and hives each spring. I had seventeen one winter; only five hybrids came through. I have had the impression the Italian queens have not been so good this last two or three years. This may have been due to the enormous demand, but now there should be an opportunity to breed the best only and scrap the remainder. Yes, breed back to the old English by all means, but until we have a sure remedy and a certain prevention against Acarine disease, let us not lose sight of the fact that the foreign bee can, and does, withstand disease, and when a good strain is obtained, and their peculiar habits understood and worked up to they will certainly "deliver the goods."

H. HILL, Ockbrook, Derby.

Laying Worker Present with Queen.

[10728] A question was raised in the July number of THE BRITISH BEE JOURNAL as to the possibility of a laying worker being present in a hive at the same time as a fertile queen.

A few days after reading the letter I had an interesting experience in this connection.

I was examining a hive infected with American foul brood. After examining one or two combs I found the queen, a young fertile Italian. She was on the second or third comb, and had a small but compact brood nest of all worker brood in all stages on that side of the hive.

She was not a good layer, but I attributed this to a lack of bees. I continued to examine the combs and found several empty of brood adjoining the brood nest. I then came to a comb containing a lot of dead

brood, which I decided to remove, and while I was examining this comb I noticed a worker withdrawing her abdomen from a cell. I watched her, and she walked about over the comb, putting her head into a cell to examine it from time to time. I waited for some time to see if she would lay an egg, but she did not do so.

I then shook off the bees, and removed the comb, which was full of foul brood.

On examining it carefully I found that a number of the cells contained eggs, usually two in each, attached to the side walls of the cells, near the top, and none at the base of the cells, as in normal cases. These eggs were scattered here and there over the comb. They were clearly deposited by a laying worker, and, I have little doubt, were laid by the bee I saw withdrawing her abdomen from a cell.

I think, therefore, that there is no doubt that this hive contained a laying worker and a fertile queen (though possibly a failing one) at the same time, though the worker was not laying near the brood nest.

This unusual phenomenon may be partly explicable by the fact that the moral of the hive had gone to pieces, owing to the combined effects of American foul brood and Acarine disease.

I know they had the former, and believe they were suffering from the latter as well.

C. T. SANCTUARY.

Working for Extracted Honey.

[10729] I run my apiary chiefly for extracted honey, and have found the following method successful. Being careful to go into winter quarters with strong stocks caused by stimulative feeding during September and using young queens, I start gently feeding with warm, thin syrup as early as the weather will allow in March, and when the stocks are strong enough to bear it I carefully remove a comb or two of brood from the stronger and place in the centre of the brood nests of the weaker stocks, until some of the colonies are strong enough for supering. I then place on the latter a few shallow frame supers with drawn out combs, being careful to note there is no drone comb; this induces the queens to lay eggs, especially if warm stimulative feeding is kept up over the supers for a short period. When the brood is sufficiently advanced, and the other stocks ready, I place on the excluders and shallow frame supers, and by placing in the centre one or more of the combs of brood I find the bees take to them at once and one can follow on with further supers as required.

A friend of mine says he has found the following method still more successful. In the winter place the strongest stocks in pairs. In the spring, after stimulative feeding, when bees are ready for supering, the honey flow has commenced, and bees are flying freely, he removes No. 2 hive behind No. 1, and after placing under the brood chamber of No. 1 a shallow frame super with starters only, he carefully adds a super box to take brood size combs, and removes the combs with adhering bees from No. 2 into this, being careful to note the queen has been left behind; he then places at least two shallow frame supers over (not using excluder), and follows on with supers as required. In the autumn he says there will be no brood in the lower shallow frame supers. In this way he says swarming usually does not take place, and the result is a large honey harvest. No. 2 hive after being denuded of most of its population he places almost directly behind No. 1 and adds a few drawn out combs or frames with full sheets of foundation, and if necessary feeds for a short time with warm syrup; it will develop into a strong stock by the autumn, when it can be requeened if considered necessary, as well as the old stock, No. 1.

I should much like your opinion. Of course it should be understood the W.B.C. hive is the best for working on the above methods, as all the supers are interchangeable.—W. G. KIGHT.

[As we have not tried either of these methods, we are not in a position to give an opinion. "The proof of the pudding is in the eating." If our correspondent has found that by following a certain plan his honey harvest is increased and swarming prevented, it is a good one, and he cannot do better than stick to it until he finds a better one. Success in bee-keeping is not always achieved by adhering strictly to text book methods, *after experience and knowledge have been acquired.* —EDS.]

Questions, &c., for Bee-Keepers for Self-Examination.

(*Students are recommended to write their answers, and check them afterwards by reference to books.*)

687.—State exactly the differences between nectar and honey.

688.—How should an artificial swarm which is without a queen be dealt with? Give full details.

689.—With what notable bee investigations are the names Snodgrass and Casteel connected?

690.—What is chitine? Mention several insects (and the parts of them) in which it is found.

691.—What adulterants of honey may be looked for, and how can they be detected?

692. Explain why a knowledge of the embryology and anatomy of the bee is of importance to the bee keeper. J. L. B.

Appeal for Sergt. Naish.

Received to date:—(1) Mr. R. Lee, 2s. 6d.; (2) Mr. G. G. Desmond, 5s.; (3) Miss Greenwood, empty hive; (4) Mr. Rose, Liverpool, offer of 20 per cent. off list price for hives if purchased from him and half carriage; (5) I supply the bees. Wanted, another 60s. in small amounts, please. H. O. MORGAN (Capt.).

December 7, 1922.

Notices to Correspondents

J. W. B. (Notts).—*Moving hives.*—This may be done any time after the bees have been confined to the hive by inclement weather for a week or more. The new site may be prepared any time. A half-brick should be placed under each leg of the hives, and these bricks may be placed in position and levelled some time before the hives are moved. This is easily done by means of a trowel, a spirit-level, and a straight-edge about 3 ft. long. The hives may then be carried to the new stand any time. If the movement is only a short one, the work should be carried out in the evening, and done with as little jarring of the hive as possible. The Swiss entrance should be closed, or a handkerchief lightly stuffed in at the entrance will prevent the bees flying out. For carrying, a couple of pieces of stout wood, about 7 ft. long, should be slipped underneath the hive, so that two persons can carry it quite comfortably, sedan-chair fashion. Do not try to carry more than one hive at a time, or yet rush the job by using a wheelbarrow, or disaster may follow by upsetting the hives. The jolting of a wheelbarrow is also likely to disturb the bees too much.

G. W. T. (Paisley).—*Small drones.*—The small drones have been reared in small cells, probably in an old comb which has been used for breeding for a long time, and the cell walls have been thickened by the cocoons, etc., left by the larvæ. The drones from a laying worker would probably be as large as any other, if reared in a drone cell, but a laying worker usually deposits her eggs in worker cells.

WANTED, a "Little Goliath" or similar Lathe cheap.—W. HERROD-HEMPSALL, Old Bedford Road, Luton. l.16

WINCHESTER CLOVER HONEY.—Tins, 14, 28 lbs., at £6 cwt.—VARLEY, Abbotsacre, Winchester. l.14

BEES AND APPLIANCES.—Simmins' strain 1922 Queens, Standard and Shallow Drawn Comb, 1922, and Racks Shallow Wired Foundation, Extractor, Ripener, etc.; free from disease; relinquishing bee-keeping. Send for list.—A. P. THOMAS, Stanley House, Holyhead. l.10

THREE "Tamlin" 100-egg Incubators; reliable machines; relinquishing poultry-keeping. Send for list.—A. P. THOMAS, Stanley House, Holyhead. l.11

CLOVER HONEY, lovely flavour, colour and aroma, 1s. per lb.; sample 3d.—HARVEY, The Apiarist, Andover. l.17

COMPLETE OUTFIT for Sale, four Hives and Stocks, Extractor, etc.; never diseased; owner removing.—40, Blackheath Park, S.E.3. l 8

WANTED, Light Car, Singer, Swift, or similar make, about 7 to 8 H.P.—W. HERROD-HEMPSALL, Old Bedford Road, Luton. k.42

TAYLOR'S SOFT WHITE CANDY.

Manufactured from guaranteed pure White Cane Sugar.

1/- per lb., post extra,
or 4lb. parcel, **5/-** post free; 7lb., **8/-** post free; 10lb., **11/-** post free.

Special quotations for large quantities.

Feeders, Quilts and Winter Appliances of every description. Illustrated Catalogue post free on application.

E. H. TAYLOR, Ltd., Behive Works, WELWYN, HERTS.

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One Penny per Word

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PRIVATE ADVERTISEMENTS.

"HONEYSUM" FOR CHRISTMAS.—Delicious Honey Toffee, parcels, 2s. 6d., 5s.—BOWEN, Coronation Road, Cheltenham. l.13

HONEY FOR THE CONNOISSEUR.—Produced in my own Apiaries, and guaranteed of the finest possible quality, 1s. 6d. per lb.—HARVEY, The Apiarist, Andover. l.18

FOR SALE, 2-year-old Terriers, Dog and Bitch; Sealyham strain; splendid ratters and house dogs; owner giving up out-apiary; 3 guineas each —SECRETARY, Item. Bee Association, Fishguard. l.7

WANTED for the Continent, a Queen Breeder, methodical and capable of working to schedule time in producing queens in quantity; single person of either sex.—Apply, giving references, to Box 93, BRITISH BEE JOURNAL, 23, Bedford Street, Strand, W.C.2. k.2

THE World's Famous Raspberry, Lloyd George, perpetual fruiting, 10s. dozen, 60s. and 70s. per 100.—J. J. KETTLE, The Violet Farm, Corfe Mullen, Wimborne, Dorset. h.78

BUSINESS ADVERTISEMENTS.

1½d. per word.

THE SOUTH HAMPSHIRE APIARIES beg to announce they are now booking orders for next season, and would advise their customers to book early to ensure first delivery.—Catalogue on application to H. E. NEWTON, New Milton, Hants.

PURE CANE CANDY.—4 lbs., 4s. 6d.; 7 lbs., 7s. 3d.; 10 lbs., 10s.; post free.—STONE, Chelsea Road, Easton, Bristol. l.19

PURE CLOVER HONEY in 7-lb. tins, an Ideal Xmas Gift.—PEARSON & GALE, Marlborough.

The Candy that is eaten to the last grain.

BEE CANDY.

Finest quality of guaranteed pure cane sugar, made by James Pascall Limited, is now reduced in price to—

7 lb. parcels *packed in* **7/-** *Postage 1/3*

(with reductions on 1 cwt. and over).

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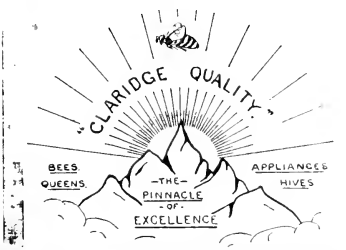

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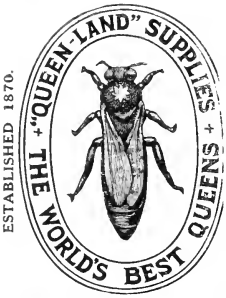

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The Bee-Keepers' Calendar.

DECEMBER, 1922.

28 Thursday. "Love guards the roses of thy lips,
And flies about them like a bee.
If I approach he forward skips,
And if I kiss he stingeth me." *Lodge, "Phillis."*

29 Friday. "Thou cloggit busy humming bees
That never think to drone,
On flowers and flourishes of trees
Collect their liquid brown."
Alexander Hume, "A Summer Day."

30 Saturday. "And over the heather-drowsy hill
Where the burdened bees were buzzing still,
The two little sun-bright barefoot children
Wandered down at the flowers' own will."
Noyes, "Progress of Love."

31 Sunday. "Z's the zuzz, zuzz, zuzz which tells us
By its sound what our pets need.
May the zuzzers live forever
And their keepers have 'God Speed.'"
"A Beekeepers' Alphabet."

Exit 1922.

With this issue we say farewell to one of the most disappointing years bee-keepers have ever had. There is, however, a gleam of light somewhere in the gloomiest year. And we may be thankful that during the dull, damp weather of the latter part of the year, such weather that in other years has appeared so favourable to the spread of Acarine disease, we have not had a recurrence of the epidemic. There is still a fair amount of disease about, but on the whole there has been a great improvement, which we trust may continue during the coming year.

Bee-keepers, it is well known, are incorrigible optimists, and all, ourselves included, are hoping for a good time during the coming season. We thank our readers for their support, not only during the past, but in previous years. This issue completes the fiftieth volume, though it is not quite fifty years since No. 1, Vol. 1, was published, the date of the first issue being May 1, 1873. Our thanks are due to those who have so loyally supported THE BRITISH BEE JOURNAL during that long time, and to whom it owes its present proud position of the only *weekly* bee paper in the world.

Jottings from Huntingdonshire

Mr. Bowen's article on Bibury was no doubt intended to create additional interest in this charming village. Bibury is considered by many travellers to be the prettiest village in England, but villages in Derbyshire, Cumberland, Sussex and Devon run it close. Many Gloucestershire people, however, give the palm to Eastleach. It is certain that for a succession of charming villages and small towns Gloucestershire cannot be surpassed. The whole of the Colne Valley is beautiful. The Windrush Valley is not quite so romantic, although Bourton-on-Water, Sherborne and Great Barrington are in themselves places of great charm. Did ever one alight upon such towns as Chipping Campden, Stow-on-the-Wold, Cirencester, and Painswick. From a bee farmers' point of

view Gloucestershire offers much, but from the view of agriculture the country leaves much to be desired, comparing badly with Huntingdonshire, for instance, where crops of wheat eight quarters to the acre can be raised. I believe the average in Gloucestershire is about four. Of course, the rent of the land is lower. E. F. HEMMING.

Steeple Gidding.

Hasten Slowly.

By J. ANDERSON, M.A., B.Sc., Aberdeen.

Dr. Alaushády, with characteristic enthusiasm, called a conference held in London on December 2, at which proposals were made (1) to standardise British beehives, and (2) to adopt Langstroth equipment. There are many earnest bee-keepers in Britain who have neither the time nor the money to attend a hastily-convened conference to be held in "the heart of London," and yet these may have "thoughts of great moment, worthy cogitations." I am setting down a few thoughts on the subject, just to provoke discussion.

Any logically-minded "new beginner" might imagine that the present British standard frame had been adopted after much study of the bee, and finally established as the result of many experiments carried out under varying conditions. He will be surprised to find that this is quite a mistake. About 1860 a Devonshire bee-keeper named Woodbury made the first British hive of the modern type, and this was later standardised by the British Bee-keepers' Association. The Woodbury hive was 14½ inches square by 9 inches deep; it remains the British standard to this day, and we have been frequently advised by leading authorities that it is the best type for Britain.

Our present state of unrest is due to some enthusiasts—all honour to them—who have looked beyond Britain and British authorities to countries in which bee-keeping has become a business, and at last there is general agreement among progressive British bee-keepers that the Woodbury has been standard long enough. [The Woodbury frame was 13 x 7¼. Since 1662 the standard frame has been 14 x 8½ and not the Woodbury.—EDS.] Towards this result probably the greatest contributions have been made by Simmins and Manley. Long ago Simmins broke away from the Woodbury standard by using a frame 16 in. by 10 in. It was, however, the Manley hive fitted with Simmins' frames that a few years ago caught the popular fancy and gave much impetus to the revolt against convention. Incidentally, I hear that Mr. Manley, having induced many to adopt the Simmins frame has now himself abandoned it for the Langstroth.

In adopting a new standard we must proceed slowly, cautiously and scientifically, lest we repeat the blunders of the past. If we are to make a radical change there would not seem to be adequate reasons why we should go back to a standard still older than the British and equally the result of an accident. The first edition of Langstroth's book appeared in 1885. He was a mighty man, a pioneer, an out-and-out Radical for the times in which he lived. He made a hive with combs that were really movable, and with a roof that came off! And there was more beside. But we could hardly expect that the first movable comb would also be the best for all time, incapable of further improvement. That is not the way things work out. The Mauretania is very different in many ways from such early steamships as the "Charlotte Dundas" and the "Comet." The modern aeroplane is not very like that which first raised the Wrights towards heaven.

We have jettisoned the straw skep, once more common in Britain than the Langstroth hive will ever be, and we should not be unduly influenced by the fact that the Langstroth equipment is very popular in America and in countries that have come under American influence. The Langstroth frame is an interesting link with one of the great bee-masters of the past, but Langstroth would be the last to claim that he had reached finality, and that his hive and frame were not susceptible to further improvement. There is some evidence from the United States that the Langstroth frame has not been found perfect in practice. It is too shallow for successful wintering, and scientific advisers of American bee-keepers have found by experiment that stocks in Langstroth hives winter better when the hives are set on end. It is even probable that the very heavy winter losses so general in America may be due to defects inherent in the Langstroth frame.

If we must adopt an American standard many with good reason would prefer the Dadant-Quinby to the Langstroth frame. Charles Dadant had the vivid imagination and the alert mind of the Gaul, but he had also a patience not usually allied to such qualities. He began where Quinby left off, experimenting with frames of varied shape, and ranging in size from 6 inches square to 18 in. square. The frame finally adopted—the Dadant-Quinby—is 17⅞ in. by 11¼ in., and the brood-box usually contains ten such frames. Dadants are very large producers of extracted honey, and have fully tested this large frame in many hundreds of stocks and over a period of more than 50 years. The Dadant frame has also been widely adopted by bee-keepers in Europe, in Algeria, in Latin America, and even in Asiatic countries. For the convenience of former users of Langstroth equipment "a modified Dadant" or "Dadant-Blatt" frame has been introduced which has Langstroth length (17⅝ in.) and Quinby depth.

My contributions to bee discussions have so frequently been destructive that I would like to add just a very little constructive

philosophy for once in a while. Perhaps because I was a teacher for 20 years I have a great dislike to fractions, especially vulgar fractions. For this reason I have always liked the Simmins frame with its easily remembered dimensions of 16 in. by 10 in. It has almost the same comb-area as the Langstroth, is better proportioned, and better for wintering than the Langstroth. But it is going to be too small for the bees that will be kept in Britain when "Isle of Wight" disease has done its work. I have been experimenting with a frame which is practically the Dadant-Quinby with the fractions smoothed out. This frame is 18 in. by 12 in., and I had a box made to take 12 such. Early this season I placed this under a stock on 10 standard combs, and in due course had both boxes crammed with bees. I was quite ready for a honey flow that did not come, but I am waiting for another season. The stock is wintering on 10 big combs, and the experience has already been of some value.

If British bee-keepers are wise they will begin where American bee-keepers left off and not where they began. We have been rather fond of discards in the past. Quinby tried the metal comb and dropped it. The split-topped section went out of use in America just when we took it up. The quilt was an American device which displaced the British "crown-board," but quilts are not now used in the States.

We may pay too dear for international uniformity as many a Ford owner will readily acknowledge. Just when Britain is taking renewed interest in bees and bee-keeping is not the best time to stereotype apparatus and methods. Let us extend the period of experiment with the object of ultimately adopting standards truly scientific because based on a study of the bee and its instincts instead of on isolated experiments made very long ago by pioneers of the craft.

[Mr. Anderson's statements in the first part of the article are not correct, as may be ascertained by reference to the early volumes of THE BRITISH BEE JOURNAL. The British Standard Frame was not decided upon without due consideration, and study of the bee. Neither the Woodbury or any other hive has ever been adopted as a standard hive by the British Bee-keepers' Association, nor was the Woodbury frame adopted as the standard. The Woodbury frame was 13 in. by 7¼ in.; the British Standard is 14 in. by 8½ in.

International Standardisation is not a new project. It was advocated by a Mr. H. Jenner-Fust, jun., in the "B.B.J." for January 1, 1876.

"So far back as 1875 there was a proposal by THE BRITISH BEE JOURNAL that the British Bee-keepers' Association should determine on a standard frame by offering prizes for hives containing frames of the size they chose to adopt. The correspondence that ensued and the opposition by makers and dealers prevented any unanimity on the subject. From the time when Woodbury made his hive, most of those who followed his example made the frames to suit his own ideas, with the result that these, not only in different apiaries but often in his own, were not interchangeable one of the first advantages of the movable comb principle.

As time went on and the extractor came into use it was found that different-sized frames were rather a drawback. There were a host of frames on the market differing slightly in dimensions, and, of course, every maker thought his the best, and did not wish to give it up. It was not until 1882 that the Association felt the time propitious for putting forth a standard frame. The many disadvantages accruing to bee-keeping from the want of a standard frame were so patent that they hardly required enumeration. The leading successful bee-keepers were using a frame whose dimensions very nearly approximated that of the Woodbury. Mr. Cowan's frame was 13¼ by 7½ in., Mr. Hooker's 13½ by 8½ in. Mr. Cheshire used the Woodbury 13 by 7¼, which was also put forth by Messrs. Abbott & Neighbour. It was very suggestive that these gentlemen—long-experienced and practical men—should be using such a frame. It was not therefore surprising that at the annual general meeting of the Association it was unanimously decided, on the motion of the Rev. G. Raynor, seconded by Mr. Cowan, 'That it is desirable that the British Bee-keepers' Association do set forth a *Standard frame* stamped by its sanction and authority, with a view to bringing such frame into general use, its size and form to be determined by a committee appointed for that purpose.' In accordance with this decision, Messrs. C. N. Abbott, T. W. Cowan, F. Cheshire, J. G. Desborough, J. M. Hooker, Rev. G. Raynor, A. Neighbour, and the Rev. F. T. Scott were appointed the committee to carry out the foregoing resolution.

The committee had two long meetings, during which much correspondence was read, followed by very interesting discussion, and came to the unanimous conclusion that the *Standard frame* should be 14 by 8½ in. outside measurement, and that the top bar be 17 in. in length. This has been the standard ever since. There was some wish that the Association should fix on a standard hive and fix number of frames, but the committee felt it would not be right to do so, as it might restrict the size of the hive and prevent its expansion, the Chairman (Mr. Cowan) pointing out that 10 frames were hardly sufficient in some localities, and that he was using hives with 13 frames. It was a good thing that the Association left out the size of hive, as the Standard frame judiciously used either by lateral expansion of the hive or for storifying in the hands of intelligent bee-keepers has proved most satisfactory, and in every way suitable to the conditions prevailing in this country.

The size of the frame having been decided upon, the Association offered prizes for hives fitted with such frames. The makers responded loyally and readily adopted the frame, which very soon showed its advantage by the reduction in the cost of appliances."—EDS.]

North Hampshire Notes.

What of 1922? Well, a difficult season in these parts. However, as one who has been fighting "Isle of Wight" or Acarine disease for some ten years I have not found it overwhelming. Eight stocks survived the 1920-21 winter. I lost two swarms, but obtained a couple of vagrant swarms. Eight have increased to fifteen stocks. The total honey yield was a little over 700 lb. My profits averaged £2 per hive in cash for the eight original stocks. I have purchased one W.B.C. hive, and constructed four W.B.C. hives out of the proceeds of sales during the year. A few supers of shallow frame foundation have been drawn out and I have quite 150 bait sections for next year.

From accounts given in THE BRITISH BEE JOURNAL recently the above appears to be a rather better one than can be recorded in all apiaries, hence these notes.

I hoped for better results, but am sure that the secret of my moderate success was due to observing what was happening in February and acting accordingly. In that month there was unusual activity in the hives, and I feared mice were the source of trouble. The breakback traps, however, captured tits and robins only, so I peeped in a hive. The brood nest showed sign of having been large for the time of year, and little food was near the brood. The number of bees in the hive was small. Other hives showed a similar state of affairs. At that time I had twelve stocks, and these very soon diminished to eight. This appeared to be due to losses owing to the open weather and the activity of the queens and bees. Having read in THE BRITISH BEE JOURNAL of lump sugar being fed, I immediately got section cases, took out the two pieces of glass and placed the cases over the feed hole. I filled the section cases with lump sugar as I murmured "An early season and a quick one." After damping the sugar, I put a sheet of glass on the top and covered up well. Occasionally an inspection of the sugar was made, damping or replenishing, as occasion required, until March was out. There were no signs of dysentery, but occasionally the bees cast out small quantities of sugar.

By the time the dandelion was flowering the bees were well up to strength, and the apple blossom found colonies ready to take full advantage of the flow. This year, as in 1911, I found the bees taking full advantage of the hawthorn blossom, and the honey appears to have a not unpleasant smoky flavour. I watched individual bees visiting the apple blossom and was astonished to note how rapidly the little creatures move from flower to flower. The nectar appears to be remarkably accessible, for a couple of seconds sufficed for a visit.

May progressed, and I began to make preparations for a bumper crop. Ere Whitsuntide arrived, I had quite a moderate number of sections off the hives, and shallow frame supers were gradually filling. After Whitsun week the slump began. All finished sections were quickly off, and little more was done during the rest of the season.

Towards the end of May the bees were breeding at an enormous rate. All ten combs in brood chambers were full of eggs or brood, and even at the bottoms and sides where possible, drone comb containing brood was found.

In June, when the honey flow practically ceased, I remarked to a friend, "I can't understand these bees. They are sticking everything down as if for winter!" Never have I seen so much propolis used. Looking back, it appears that they *were* preparing for winter, and the knowledge gained may possibly be of service in stopping useless operations another season.

About the end of July all the bees appeared shiny, and were loafing around the entrances and behaving as if queenless. Inspection showed the hives full of bees (and wicked ones at that), absolutely no brood, and very little stores in the brood chambers. Supers were finally cleared off. Feeding with syrup commenced, but it was some time before breeding was in full swing. One hundred and sixty pounds of sugar were used in making syrup to feed down for the winter, and it is hoped this will carry the majority of the stocks safely on to February.

The quality of honey was good, twenty dozen of the best sections I ever produced finding customers in the West End, who ask for more. No section that did not reach 16 oz. when glazed was sold, and quite a number when glazed went 20 oz. and 21 oz. My best hive—blacks— gave eighty grade I. sections and about forty unfinished. The best hive for run honey gave 128 lb.

W. B. CORBETT.

Hurstbourne Tarrant.

[It is a pleasure to read such a good account for the past year. We congratulate Mr. Corbett on the success due to his foresight and good management.—EDS.]

Are the Bees to Blame for Robbing?

In the issue of November 3, our old friend Kettle has quite a lot to say about robbing. Most of us, I think, have at times said something about this evil, but I fear it is not always printable. This year the bees have been at it since August, and even now they make raids on every mild day, and it is very difficult to stop them. Our friend does not know whether his or the parson's bees are the culprits. That is the trouble, I find. Once the evil starts it is difficult to say who is mixed up in it—one day your bees are raided, the next yours are the raiders. You can't shut up the bees every mild day. You may do it one day, or two, but they are at it again directly your back is turned. These raids must be very distressing to stocks at a time of year when they should be settling down quietly and undisturbed.

Now, robbing is one of those things which should never be allowed to start. It is

always easier to prevent than to cure, and if all bee-keepers were to work on this maxim, I am sure both the bees and ourselves would be saved a deal of trouble and anxiety.

Carelessness is the root of the evil. The worst danger period is at the end of the honey flow, and it is then we ought to be so very, very careful. The tendency with many is to keep the supers on right up to the very last, and then, when nothing is coming in at all, off they come. Now, what are the bees to do? Their stores have suddenly gone, so, of course, they look about for some easy and quick way to replenish their empty larder. That means robbing. But if we take supers off just before the end of the flow and feed lightly with syrup we can at least considerably reduce the desire to plunder, and it keeps the bees occupied, to say nothing of encouraging the queen to go on laying.

Then, again, manipulations during the sunny hours at the end of the season with bees on the look out for anything in the way of sweets is a splendid way to introduce robbing on a large scale. But if these manipulations are left till sunset, when the bees are in, the danger is reduced to a minimum.

Another loophole, too, is during the September rapid feeding operations. It is quite possible to spill a very little syrup here and there outside when feeding several stocks, so great care should be exercised in this direction, and feeding should only be done in the evening. If you do spill any, sprinkle carbolic about the spot. Some bee-keepers leave the feeding too late in the season, and such stocks are very prone to go robbing to support themselves until they are fed, as well as being a means of attracting robbers through perhaps being in a weakened condition and unable to repulse invaders.

Pieces of comb, hive scrapings, odd lumps of wax or a dirty calico quilt left about, an empty hive with the shutters open, all encourage robbing. A bonfire is the proper place for rubbish from the apiary, and the bee-man should carry a tin with him and put all the wax and such bits into it as he goes manipulating.

I think it is safe to say that if your stocks are being robbed, it is somebody's fault—very likely your own—but I do think at certain times of the year, particularly in spring and late summer, we should all take extreme precautions for the benefit of ourselves and our neighbours.

H. K. SPRINGETT.

Acarine Disease.

A considerable amount of confusion is apparent in the correspondence appearing from time to time regarding Acarine disease.

Until recently all losses of bees from diseases of which crawling was a symptom have been attributed to "I.O.W." disease, though these losses have undoubtedly been due to several diseases—of which Acarine disease is the most important. The question as to the identity of this complaint with "I.O.W." disease of 1904 is of no real importance to-day, as it is generally acknowledged that it is responsible for the majority of the losses incurred at the present time. As is well known, the complaint is the result of infestation of the tracheal tubes by microscopic parasites, which live and breed within the tubes and migrate to other bees when congestion of the organ occurs owing to the increased number of parasites.

The presence of these parasites gives rise to the crawling usually observed in the advanced stages of the disease, though until this stage is reached the bees behave normally, and are generally assumed to be healthy. Confusion is frequently caused by this incorrect assumption.

The statements which appear to the effect that colonies previously diseased "have thrown off the infection" should be viewed with suspicion, unless based on careful microscopic examination of the bees referred to, as it is quite impossible to trace the course of the disease in any other way.

A colony may be described as "infected" when any of its members harbour the parasites, even though the familiar symptoms of disease are not apparent.

In "B. B. J.," November 9, page 547, a statement appears to the effect that "I.O.W." is the result of queens reared under unfavourable conditions, or "mated to diseased colony drones." This is merely a theory, based on the incorrect assumption on the existence of hereditary susceptibility to the disease, and is in direct opposition to the observed facts.

Careful experimental work has shown that all bees—including the most active and vigorous strains—can readily become infected as the result of contact with diseased bees from which parasites are migrating. Infection has been conveyed in this manner to young bees of Carniolan, Italian, Cyprian, American, Dutch and hybrid strains at the age of five to six days.

It can therefore be taken for granted that where young bees emerge from the cells in presence of adult bees in an advanced stage of the disease, infection of these will result, irrespective of the grade or strain of the queen from which these young bees are produced.

As the parasites breed at approximately the same rate within the breathing organs of all bees, it follows that the degree of infection in individual bees is almost entirely dependent on the time which has elapsed since the infection of these individual bees.

As migration of parasites does not occur to a serious extent until the breathing organs become congested, the spread of disease within an infected colony is therefore to a very large degree dependent on the age of the bees of which the colony is composed.

If, therefore, the age of the bees be kept below the critical point at which this rapid migration occurs, the course of the disease may be controlled, and where detected in the initial or intermediate stages, can be eliminated by rational treatment.

Where the colonies are headed by queens which are extremely prolific at the critical periods of the year, viz., spring and autumn,

this condition obtains, and it is possible to ensure practical freedom from the complaint even in disease-infected areas.

In cases where infection is observed in the early stages, during the working season, the introduction of a young and active queen of an extremely prolific race will result in the eradication of the trouble; but in the later stages of the complaint, even this will be of no avail, as the young bees will become infected within a few days of emergence from the cell. ARTHUR M. STURGES.

An Excellent Comb.

The illustration here given shows a well-built comb in a British standard frame. The comb is almost perfect, its only fault being that it is not built down to the bottom bar. There is a splendid area of healthy capped brood that is good to see, and Mr. Clark, gardener and head man at "Castle Hill," Inverness, is to be congratulated on the careful management that has produced it.

Wax Match Danger.

PROHIBITION SUGGESTED.

The Shires Association Conference decided to ask the Federal Government to prohibit the importation of wax matches and to permit the entry only of matches strikable upon a preparation attached to the container. It was stated that many fires resulting in great damage, had been caused in the country through the use of wax matches.

It was also decided to seek to secure a proclamation that bees are a nuisance in urban areas.—From a New Zealand Daily Paper.

Unedited Letters of Huber.

(*Continued from page* 557.)

[*Published by the kind permission of the translator, Mr. C. P. Dadant, editor "American Bee Journal."*]

CAUSES OF SWARMING—ROYAL CELLS—JEALOUSY OF THE QUEEN—TRAVEL SUPPLIES OF THE SWARMS.

Lausanne, June 30, 1828.

You are a musician, my dear girl; if I had known that you had bees at Bois d'Ely and swarms to expect, I would have called upon your sensitiveness and upon your ear for music for an observation which I have often made and which might have interested you as it did me; let us hope that it is not too late.

Let us suppose that you have just heard the charivari which indicates everywhere the issue of a swarm; you come running to witness it; there it is above your head. I see you in the midst of many bees, enjoying this fine sight, without being frightened by the tumultous bustle of so many beings which, we are told, are armed with stings that are so dangerous—but do not believe it.

It has been recognised—and those who know how to care for them will tell you—that bees are never milder than on the days when they swarm. Yet to secure their swarms people treat them in a manner that might irritate them. Those bees, so irascible and vindictive, are never thus in such an occasion and when the proposition is swarming, the redoubtable sting is neither felt nor seen.

Take note, I pray you, of a truly balsamic odour which spreads about you; the odour

of honey, which this recalls, often allays their anger. I have caused many fights to end by throwing a few drops of honey upon bees which appeared to be furious. Is honey, for them, when it is scattered in their atmosphere, a talisman which brings them back to their natural gentleness and keeps them from becoming angry?

Do you hear any discord in this numerous concert? This soft humming is, to my sense of hearing, composed only of accurate tones. This aerial music goes straight to my heart: I acknowledge that I never heard it indifferently; is it possible that what I find in it expressive, touching, melancholy and even solemn, comes only from myself or my imagination? I will not deny the natural exaltation which rises within me through this interesting event and this apparent agreement in will and sentiment in beings which are placed (by us it is true) almost at the foot of the scale.

Although I have not said a word to you about it, I am sure that you will divine at least one of the reasons which cause the periodical departure of swarms: that which is true, wise, useful, may be often foreseen. To help you a little, however, permit me to use a comparison which is within reach of the master and of the pupil and convenient for both.

If you had been but a simple shepherdess, would your kindness and your natural reasoning allow you to retain your sheep or your goats within a space of pasture that could feed but half of them? No, doubtless you would not doom them to the horrors of famine. It is to preserve the bees from this danger that nature has instructed them to seek, like nomad tribes, a salvation in periodical migrations.

The queen, which you know only by reputation, is the motive which directs the multitude, whose mother she is. They say that she can produce, in a year, from sixty to eighty thousand brood. This is enough to make up the swarm which is, the following year and perhaps sooner, to seek far away the sustenance necessary to the keeping of the new population.

(Note of the translator.—Huber did not yet know, as we do now, that the queen lays hundreds of thousands of eggs, instead of tens of thousands, neither did he know that which was learned later by the introduction of bees of different colours, that bees live only a short time in summer, an average of about 45 days.)

As the substances which are suitable for the food of bees cannot be increased indefinitely in a limited space, they have been taught to seek far away the food which is required for a constantly growing population; it is for this that wings have been given them, with the knowledge for using them. Let us study now what has been prepared to determine their migration.

Accept my word, dear girl, until you see it with your own eyes. I assure you that I have not accepted anything till I have secured positive proof. The care with which Burnens has informed his master and friend has been a great help in this occasion.

But I must ask of you here again much faith and docility; for will you readily believe that an insect, a simple bee be susceptible to jealousy? You must accept this statement, for nothing is truer; all you require is the evidence. For this purpose a few details are necessary.

You know that a wax-comb is composed of a greater or less number of contiguous cavities which have been named cells; it is in those little lodges that the bees deposit their crops of honey or of pollen and that the queen lays her eggs when they are fit to receive them.

Have you noticed some openings much larger than the cells and with no regularity about them? They are not the result of accident; the bees have left those spaces in the thickness of the combs. Through this arrangement, whenever they are in a hurry to travel over both sides, they can do it much more promptly than if they had to go around the edge of the comb. It is, if you please, like public squares or alleys; in our cities similar spaces have the same utility. Among the bees they have still another; it is there that they build the royal cells of which you have probably heard. In their original shape, those cells resemble an acorn cup; later they will become, as the work progresses, inverted pyramids, at first more or less truncated. It is when the royal cell is only in the shape of a cup and is not deeper than two or three lines (one-fourth to one-sixth inch), that it may receive the eggs that the queen lays in it, perhaps in passing, while she goes from one side of the comb to the other. I am inclined to believe that it is a trick devised by the architect bees. That which confirms this conjecture is that the bees, being unable to build the royal cells horizontally in the comb and give the same direction to the pyramidal part without extending it too far between the parallel combs, in the space reserved for passage, could do nothing better than fasten the royal cell cups vertically, under the edge of the spaces intended for passage; then the pyramidal part could be fastened to the cup and extended vertically in the open space below.

There is another reason which explains fairly well why the royal cells must not be built in the thickness of the comb. The queens, larger and longer than the workers for whom the ordinary cells are intended, would not find in them a space sufficient for their ulterior development.

The queens, in a hurry for laying and finding all the small cells occupied, pass to the other side of the comb through one of these passages, but perceiving the orifice of the outlined cells, insert their abdomen into them after having ascertained that they are not already occupied; they fall thus in the snare which has been prepared for them.

As fast as the small cells are emptied, through the hatching of the worker bees, the queen lays in them, as well as in the different cell cups which she finds open and

empty. Her eggs will produce successively royal larvæ and nymphs more or less advanced. It is not only by supplying a broader and differently located lodging that the bees bring to the queenly condition those which were intended only for simple workers. A more exquisite food, perhaps more stimulating and more abundant, brings about the extension of the queen organs in the cradle and especially the development of the sexual organs. Mr. Bonnet, during the visit which he paid me at Pregny, saw in one of my hives, from which I had removed the queen, more than 20 royal cells begun.

A very singular and very important thing which has not been sufficiently noticed and of which I understand but now the usefulness, is the perfect coincidence of the laying of drone eggs, always observed in the season of swarming, with the building of royal cells. A secret link assuredly exists between these two great preparations.

Here we are again reduced to admiration, is it not enough? Without this arrangement the young queens would run the risk of never becoming mothers, or of securing but imperfect mating in case their fecundation should be too long delayed (See next letter.—Ed.), but, as has been said, everything is in harmony in the natural history of bees.

Follow me another moment and you will see a new point.

(*To be continued.*)

South Staffordshire and District Bee-Keepers' Association.

The annual members' show of the above Association was held at the Station Hotel, Dudley, on Saturday, October 14, 1922. Councillor T. E. Salter, J.P., Chairman of the Tipton District Council, presided. Mr. Joseph Price, expert and lecturer of the Stafford County Agricultural Education Committee, acted as judge, assisted by Mrs. Sheldon and Mr. S. Taylor as stewards, and gave his awards as follow :—

Class 1.—Sections : 1st prize, Rev. W. H. Richardson; 2nd prize, Mr. J. Cuss; commended, Mr. G. Handley. Class 2.—Light honey : 1st prize, Mr. G. Walker; 2nd prize, Mr. P. Berrisford; 3rd prize, Rev. W. H. Richardson; very highly commended, Mr. G. Handley; highly commended, Miss Manley; commended, Mr. F. W. Astbury. Class 3.—Honey, other than light : 1st prize, Mr. W. P. Berrisford; 2nd prize, Mr. Bodley. Class 4. Granulated honey : 1st prize, Mr. P. Berrisford; 2nd prize, Mr. F. W. Astbury; 3rd prize, Miss A. Manley. Class 5.—Frame of honey : 1st prize, Mr. W. Hildreth; 2nd prize, Mr. W. J. Walton. Class 6.—Beeswax : 1st prize, Mr. P. Berrisford; 2nd prize, Rev. W. H. Richardson; 3rd prize, Mr. Geo. Handley. Class 7.—Exhibit of a useful nature : Certificate of merit, Mr. Chas. Watson. Class 8.—Light honey. Special for those who had not won a first prize in previous shows : 1st prize, Rev. W. H. Richardson; 2nd prize, Mr. George Handley; 3rd prize, Mr. J. Cuss; very highly commended, Mr. F. W. Astbury; highly commended,, Mr. W. Bodley; commended, Mr. G. Walker. Class 9.—Honey cake : 1st prize, Mrs. C. C. Thompson; 2nd prize, Miss Manley.

Mr. W. Hildreth gave the prize money for Class 8, being a special class for members who had not previously won a first prize in any previous members' show. Mr. C. W. Dutton gave the prize money for Class 9.

Tea was provided at the hotel and served in a commendable manner. Afterwards a meeting was held. The Chairman (Councillor Slater) said he knew but very little about bees; what he did know was not much to their credit. He wished the experts and those in authority would try to raise bees without stings, like the agriculturist were raising cows without horns. He congratulated the Association on the fine exhibits of honey and the company present at the meeting. It must be very encouraging to the secretary (Mr. Walton) to know that his efforts in organising this meeting were so successful and that the Association, through his efforts, was making much progress.

Mr. E. C. Middleton gave a lecture on "Several Things" (the lecture had been printed and sent to members previously, so that they could come to the meeting prepared to discuss and ask questions). The lecture was listened to with great interest, and afterwards a general discussion was raised upon points mentioned by the Rev. W. H. Richardson, Mr. E. C. Hipkins, and Mr. Amphlett, and much useful information was obtained as a result.

Mr. Joseph Price gave an address which dealt with the advantages and disadvantages of the past season. He said the bee-keeper must use common sense and observe for himself. It was no use working exactly to the Guide Book, as one had to be governed by the prevailing season. He recommended preparing during the autumn for the following spring. If one wished to spring-feed, do it in the autumn.

The Hon. Secretary gave his report of the show, said there were 18 entries, and he was pleased with the results. He had received great assistance from the assistant secretary, Mr. P. Berrisford and the Show Committee. There was one very pleasing matter he had to mention. He had received a letter from Mr. Geo. Walker, winner of the first prize in Class 2, in which he gave five jars of honey to the Association as a tribute for the good he had received from being a member and attending its meetings. The Secretary considered this the finest tribute to the usefulness of the Association they had received. It spoke louder than words, and he would be pleased if other members would take an example. Mr Bodley, winner of the second prize in Class 3, gave two jars of honey, and Mr. C. W. Dutton gave two jars.

The Hon. Secretary then put the nine jars up for sale, which resulted in augmenting the Association funds by £1 12s.

Votes of thanks passed to the Chairman, Miss Middleton Price and the Hon. Secretary terminated a successful meeting.

(*Communicated.*)

Bee-Keeping in Canada.

I am wondering if the enclosed will interest you at all in connection with your recent remarks on "Foreign Honey." It is an extract from a letter written by a friend in Ontario to a well-known resident of Wellingborough, Northants, respecting two young men who went out a few years ago. They seem to have had a better "season" than some of us here. E. HOUSDON.

"Eric and his men are still busy extracting. They have about 40,000 lb. off now; he will have over 60,000 lb. altogether. He has had an inquiry from an English firm who will buy in 25-ton lots, and also from the West for a similar amount (25 tons is a 'car lot'), but whether he will land either of them he does not know. In the meantime he is making sales every day.

"Allen has done remarkably well with his first venture into bee-keeping. He bought a small apiary last spring, 13 colonies with all necessary appliances. He paid $500 for them, and it cost him $70 to move them on to his own location. He has extracted 3,300 lb. of honey, an average of 250 lb. per colony, and has it all sold. It brought him a little over $400 in cash, and he has increased his stock to 20 colonies, so that he has virtually paid for the whole thing in one season, and something to the good as well. It is a remarkable average, but it shows what can be done with up-to-date management. Eric's average will be over 150 lb. for 400 colonies, but he has one yard of 60 that has yielded 12,000 lb. of honey (average 200 lb.). One extra good colony gathered 400 lb. of honey. The average yield of honey per colony for the province of Ontario is supposed to be 80 to 100 lb. Many of the old school of bee-keepers cannot believe in the possibility of the yields that a few of the more advanced bee-keepers are getting, but it is a fact just the same. Very few years ago we would not have believed it possible to take 250, let alone 400 lb., in one season from a single hive of bees, but it is done. Neither would we have believed it possible for a cow to give over 1,000 lb. of butter in 12 months, but that has been done too.

"I think I told you in my last of Allen's honey crop, but it was even better than I said. When he got all weighed up and disposed of he had 3,700 lb. (and some odd- I forget exactly) from the 13 colonies he started with in spring. Practically they averaged 290 lb. per colony. A neighbouring bee-keeper, an old man who has been at it all his life, had no more from 60 colonies, and the general average is around 30 lb. So much for knowing how and practising modern methods. Moreover, Allen has all his honey sold, and Eric is selling rapidly (one to two thousand pounds per day), while the majority of the smaller men have their honey on their hands yet. Eric is getting 7½d. to 8d. per lb. for small lots and 7d. for large orders. He has two men extracting all the time, and has had to employ an extra man to help with the carting and shipping, so there are three besides himself.

"Our grapes are ripe now, and we have a good crop. Tomatoes are nearly over. I have sold over 50 baskets (11 quarts, 3 make a bushel), mostly at 2s. per basket. Apples are exceedingly plentiful and are unsaleable; bushels and bushels are rotting under the trees. Peaches are very cheap too (we do not grow them here); 8s. per bushel or 3s. per basket, many of them as large as oranges."

Rainfall Recording.

The following communication, which we have pleasure in publishing, has been received from the British Rainfall Organisation Office:—

SIR,—It has been suggested to me by a reader of the BRITISH BEE JOURNAL that the interests of bee-keepers and meteorologists have sufficient in common to induce many of the former to take up the interesting hobby of rainfall recording, and that an appeal addressed to them through the medium of your correspondence columns might enable them to get into touch with the British Rainfall Organisation.

The Organisation, which is now a section of the Met orological Office, depends very largely upon voluntary observers for its information, and accepts for publication all trustworthy records sent in. A record started before the New Year would be of use in the compilation of the official volume, "British Rainfall, 1923."

Full particulars of the work of the Organisation and of the approved methods of observing rainfall will be supplied on application to the address given below.

New records are most urgently needed in upland districts, especially in the west and north, but they will be gladly accepted from all parts of the British Isles.—Yours faithfully, CARLE SALTER, Superintendent, British Rainfall Organisation, Meteorological Office, Air Ministry, Kingsway, London, W.C.2.

The Editor,
BRITISH BEE JOURNAL,
23, Bedford Street, Strand, W.C.2.

CORRESPONDENCE.

Medicating Candy.

[10750] In preference to "Bacterol," formaldehyde, or any other germicide for medicating candy, I favour onions. They contain the essentials vitamins, phosphates, potash, calcium, nitrogenous matter which are necessary to sustain any kind of life, let alone a vigorous bee life. The big fat maggot of the onion fly, often found in onions, testifies to the efficiency of onions as a life sustainer. A good sized onion—½ lb.—cut up into small pieces and boiled with 4 lb. of white cane sugar and ½ pint of water, and stirred at the commencement of cooling, will produce candy of creamy, soft consistency. While formaldehyde would kill the mite, it is not replacing the spent vitality of

the bee; it may irritate its tissues and leave it subject to dysentery.

Last year I had a race of bee, bought for English brown. Friends on seeing them immediately declare them blacks, but they are not blacks; they are nigger brown in colour, and on close inspection exhibit traces of a lighter band on the first segment. This year the mother of this colony raised two batches of queens, the first batch when I put her in the bottom brood-box, and placed a shallow super between her and the major part of her colony. These young queens were like the workers—nigger-brown. Later, she swarmed, followed after ten days by three casts. Thus there were four young queens—one brown, three banded in varying degree. Their size was also in proportion to their lightness in colour, and one yellow one ripped from the cell was like the mother-queen—yellow, and a prodigy in size. Now the workers from these young queens have two orange bands, and there are no more bees for well over a mile. Can you please tell me what race of bee I started with?

[We cannot say without seeing them.—EDS.]

Once I was looking for foraging bees among broom. I saw one, a real black one, a worker, strong in flight, short and stubby. Can I presume this to be one of the real natives?

Perhaps there are more readers of THE BRITISH BEE JOURNAL like myself would welcome enlightenment concerning the colours and habits of the different races of bee. There is the Russian bee and the Canadian bee, for instance. H. KEELING.

Appeal for Sergt. Naish.

[10731] I write to thank you for so kindly inserting my appeal for Sergt. Naish.

I have received on his behalf one empty hive and amounts of 2s. 6d., 5s. 4d., 1s. 4d. and 5s. to date, for which I warmly thank the donors.

If a few more friends will send along their shillings to make up the sum to 35s. I shall be able to get another hive to complete the Christmas gift, ready to start my friend off with his bees in the coming spring.

Again thanking you.—H. O. MORGAN, (Capt.), 46, Upper Belgrave Road, Clifton, Bristol.

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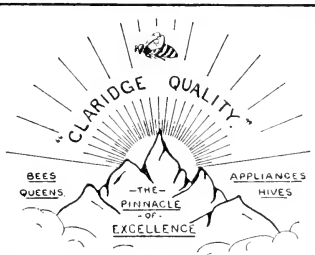

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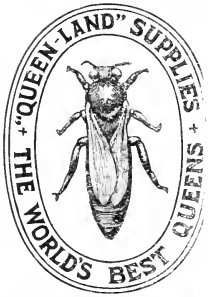

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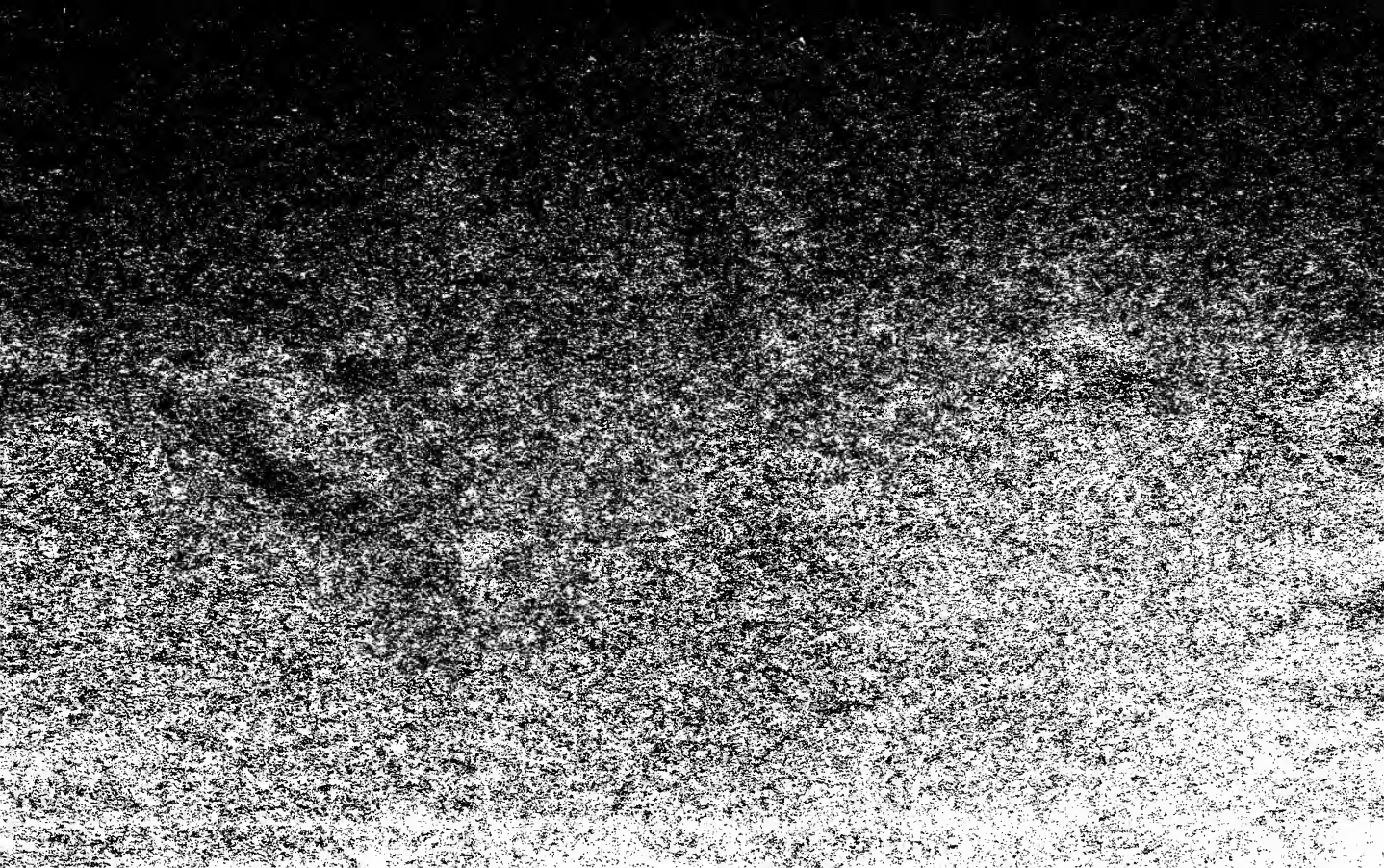
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